

TOSHIBA

Surveillix® HDDR

Operations Manual

Surveillix® HDDR™ User Guide

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LIMITED WARRANTY DIGITAL VIDEO RECORDER

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ISD warrants this product and parts against defects in material or workmanship for a period of two years from the date of original retail purchase by the end-user. During this period, ISD will repair or replace a defective product or part with a new or refurbished item. The user must deliver the entire product to an ISD authorized service center. The user is responsible for all transportation and insurance charges for the product to the Service Center. ISD reserves the right to substitute Factory Refurbished Parts and / or Factory Refurbished Product in place of those in need of repair.

Step-by-step Procedures - How to Obtain Warranty Service

[1] Verify operation of the unit by checking the instruction manual and web site for the latest updates at

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[2] If there is a defect in material or workmanship, schedule service on-line or contact the Digital Support Center for an individual Tracking Number and the location of the nearest ISD authorized service center. To contact technical support call (877) 855-1349.

[3] Arrange for delivery of the product to the ISD authorized service center. Products must be insured and securely packed, preferably in the original shipping carton. A letter explaining the defect and a copy of the bill of sale or other proof of purchase must be enclosed with a complete return street address and daytime telephone number. The Tracking Number should also be indicated on your documents. Charges for transportation and insurance must be prepaid by the end-user.

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[2] You must schedule service within thirty days after you discover a defective product or part.

[3] All warranty servicing of this product must be made by an ISD authorized service center.

[4] The warranty extends to defects in material or workmanship as limited above, and not to any products or parts that have been lost or discarded by user. The warranty does not cover damage caused by misuse, accident, improper installation, improper maintenance, or use in violation of instructions furnished by ISD. The warranty does not extend to units which have been altered or modified without authorization of ISD, or to damage to products or parts thereof which have had the serial number removed, altered defaced or rendered illegible.

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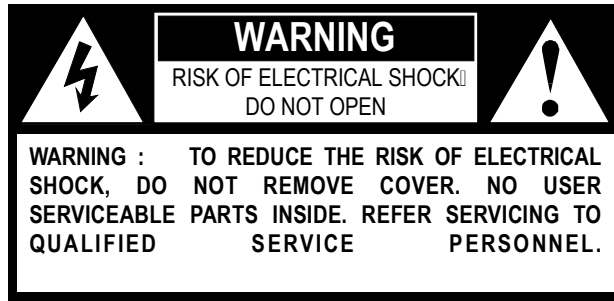
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Imaging Systems Division

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TOSHIBA

Safety Precautions



WARNING: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

IMPORTANT SAFETY INSTRUCTIONS

1. Read Owner's Manual

After unpacking this product, read the owner's manual carefully, and follow all the operating and other instructions.

2. Power Sources

This product should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply to your home or business, consult your product dealer or local power company.

3. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

4. Heat

The product should be situated away from heat sources such as radiators. Heat registers, stoves, or other product that produce heat.

5. Water and Moisture

Do not use this product near water. Do not exceed the humidity specifications for the product as detailed in the Appendix section in this manual.

6. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

7. Power Cord Protection

Power-supply cords should not be routed so that they are not likely to be walked on or pinched by items placed against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

8. Overloading

Do not overload wall outlets; extension cords, or integral convenience receptacles as this can result in a risk of fire or electrical shock.

9. Lightning

For added protection for this product during storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.

10. Object and Liquid Entry Points

Never insert foreign objects into the HDDR unit, other than the media types approved by Toshiba, as they may touch dangerous voltage points or short-out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the product.

11. Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious personal injury and serious damage to the product.

IMPORTANT SAFETY INSTRUCTIONS

12. Disc Tray

Keep your fingers well clear of the disc tray as it is closing. Neglecting to do so may cause serious personal injury.

13. Burden

Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.

14. Disc

Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

15. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.

- When the power–supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance – this indicates a need for service.

16. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.

17. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock, or other hazards.

18. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Notes on Handling

- When shipping the HDDR unit, the original shipping carton packing materials come in handy. For maximum protection, repack the unit as it was originally packed at the factory.
- Do not use volatile liquids, such as insect spray, near the HDDR unit. Do not leave rubber or plastic products in contact with the HDDR unit for long periods of time. They will leave marks on the finish.
- The top and rear panels of the HDDR unit may become warm after long periods of use. This is not a malfunction.

Notes on Locating

- Place the HDDR unit on a level surface. Do not use it on a shaky or unstable surface such as a wobbling table or inclined stand.
- When you place this HDDR unit next to a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. In this case, place the HDDR unit away from the TV, radio, or VCR.

Notes on Cleaning

Use a soft dry cloth for cleaning.

- For stubborn dirt, soak the cloth in a weak detergent solution, wring well and wipe. Use a dry cloth to wipe it dry.
Do not use any type of solvent, such as thinner and benzene, as they may damage the surface of the HDDR unit.
- If you use a chemical saturated cloth to clean the unit, follow that product's instructions.

Notes on Maintenance

This HDDR unit is designed to last for long periods of time. To keep your HDDR unit always operational we recommend regular inspection maintenance (cleaning parts or replacement). For details contact your nearest dealer.

Note on Moisture Condensation

Moisture condensation damages the HDDR unit. Please read the following carefully.

Moisture condensation occurs during the following cases.

- When you bring the HDDR unit directly from a cold place to a warm place.
- When you use the HDDR unit in a room where you just turned on the heater, or a place where the cold wind from the air conditioner directly hits the unit.
- In the summer, when you use the HDDR unit in a hot and humid place just after you move the unit from an air conditioned room.
- When you use the HDDR unit in a humid place.

Do not use the HDDR unit when moisture condensation may occur.

If you use the HDDR unit in such a situation, it may damage discs and internal parts. Remove any CD discs, connect the power cord of the HDDR unit to the wall outlet, turn on the HDDR unit, and leave it for two to three hours. After two to three hours, the HDDR unit will have warmed up and evaporated any moisture. Keep the HDDR unit connected to the wall and moisture will seldom occur.

Table of Contents

● Preface	14
About This Guide	14
Technician Notes	14
● Introduction	
What is a Surveillix HDDR?	15
New Features	16
● Chapter 1: HDDR Description	17
Basic Features	18
Front Panel Controls and LEDs	19
Rear Panel Connectors	20
Serial Number Location	21
● Chapter 2: Getting Started	22
Identifying Included Components	23
Keyboard Setup	24
Mouse Setup	24
Monitor Setup	25
Power Setup	25
Connecting a Video Source to the HDDR unit	25
Optional Components	26
● Chapter 3: HDDR Basics	27
Turning on the HDDR	28
Turning off the HDDR	28
Display Screen	29
Camera View	30
Recording Status Indicator	31
Screen Division Menu	31
● Chapter 4: Setup Options	33
Setup Overview	34
Setup Screen Overview	34
Individual Camera Settings Overview	35
Camera Information	36
Motion Setting	36
Creating a Motion Area	37
Sensor Connection	37
Voice Warning	37
Global Settings Overview	38
Recording Schedule	39
System Schedule	40

Creating a Recording Schedule	41
Special Day Schedule	41
Creating and Editing a 'Special Day' Schedule	41
System Restart Time	42
Intensive Recording Overview	42
How to Use Intensive Recording	43
Communication Setup	45
Site Information	47
Log Viewer	48
User Management	49
Changing the Administrator Password	49
Adjusting the Time and Date	50
● Chapter 5: Search Options	51
Search Overview	52
Date and Speed Option Box	53
Play Controls	53
Hour/Minute Control Bar	53
Brightness and Zoom	54
Search Options Overview	55
Performing a Basic Search	55
Advanced Viewing Options	55
Print	57
Save to JPG or AVI	57
Index Search	58
Preview Search	59
Object Search	60
● Chapter 6: PAN / TILT / ZOOM	63
PAN/TILT/ZOOM Overview	64
Setting Up a PTZ Camera	64
PTZ Detail Setup	64
Creating and Viewing Preset Positions	65
● Chapter 7: Backing up to a CDR-W Drive	66
Backup Overview	67
DirectCD® Format Utility	67
Formatting a CDR or CDR-W Disc	68
Backup Options Overview	69
Backing up to a CDR-W Drive or Hard Drive	70
Removing the Disc from the CDR-W Drive	70
● Chapter 8: LAN / ISDN / PSTN Connections	72
LAN Overview	73
Connecting to a LAN using TCP/IP	73
● Appendix A: Compatibility Statements	75
Electromagnetic Compatibility	76
Optical and Acoustical Statements	76
Visible LED Statement	76
Laser Safety Statement for a Class 1 Laser Product	76
Regulation on Noise Declaration for Machines	76

● Appendix B: Technical Specifications	77
Floppy Drive Technical Specifications	77
Network Interface Card Specifications	77
CD-ROM Drive Technical Specifications	78
HDDR Power Supply Technical Specifications	79

Preface

About this Guide

This manual is a setup and maintenance guide that can be used for reference when setting up the HDDR unit and for troubleshooting when a problem occurs. Only authorized personnel should attempt to repair this unit.

Toshiba reserves the right to make changes to the HDDR units represented by this manual without notice.

The following text and symbols mark special messages throughout this guide:



WARNING: Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.



NOTE: Text set off in this manner indicates topics of interests that can help the user understand the product better.



TIP: Text set off in this manner indicates topics and points of interests that can be helpful when using or settings up the HDDR unit.

Technician Notes



WARNING: Only authorized technicians trained by Toshiba should attempt to repair this HDDR unit. All troubleshooting and repair procedures that may be shown are for reference and minor repair only. Because of the complexity of the individual components and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. And any indications of component replacement or printed wiring board modifications may void any warranty.



WARNING: To reduce the risk of electrical shock or damage to the equipment:

- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect the power from the computer by unplugging the power cord either from the electrical outlet or the computer.



CAUTION: To properly ventilate your system, you must provide at least 3 inches (7.6 cm) of clearance at the front and back of the HDDR unit.

Introduction

What is a Surveillix® HDDR™

A Surveillix HDDR is simply a server that performs as a High Definition Digital Recorder. By utilizing the many features of a computer, including processing power, storage capacity, graphics compression, and security features, the HDDR unit is more powerful than the analog recorders of the past.

The Surveillix HDDR server software comes pre-configured for fast and seamless integration within your existing IT infrastructure. Designed around Microsoft® Windows® 2000, the server software offers unparalleled stability, security, and ease of use. Accordingly, your security investment has never been easier to maintain. Multiple users may simultaneously connect through any network connection for instantaneous live viewing, digital search, and off site video storage. Users can also connect remotely through DSL, Cable Modems, ISDN, or 56K dial-up. This powerful software enables users to establish recording schedules, create motion detection zones, use PTZ controls, and configure alarm inputs and outputs for each of the system's cameras. With the latest advancements in the HDDR Server Software, searching and indexing your video archive has never been easier. Video can now be found, viewed, and exported in a number of file formats with just a few clicks.

The Surveillix HDDR is high performance security product ready to meet today's security demands.

New Features

Toshiba's Surveillix HDDRs include the following new features:

- Optimized and Designed for Microsoft® Windows 2000®
- Supports up to 16 Digital Control Outputs on Alarm Activation
- Supports up to 16 Relay Inputs for Alarm Control
- Remote System Operation & Configuration
- Supports Multiple Simultaneous Remote Connections
- PAN / TILT / ZOOM Controls
- Simultaneous Video Search, Playback and Backup
- Video Indexes for Easy Searching
- Multiple Levels of Security Access
- Up to 16 Looping Outputs
- POS and ATM Support
- 1 Composite Output
- S Video Output
- Up to 16 Camera Inputs
- High Performance, Durable, Rackmount Case
- Output the Video to a NTSC/PAL Display
- Virtually Unlimited Storage Potential
- Supports Watermarking
- Continuous, Motion Detection, Alarm, Pre-Alarm, and Scheduled Recording Modes
- Hardware Watchdog
- 720x480 / 720x240 / 350x240 NTSC Recording Resolution
- 720x576 / 720x288 / 360x288 PAL Recording Resolution

CHAPTER **1**

HDDR Description

This chapter includes the following information:

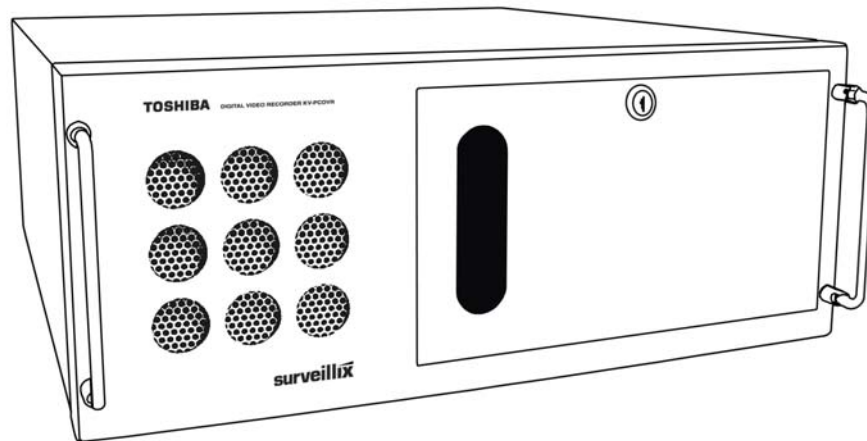
- Input/Output connector locations
- Front Panel Controls and LEDs
- Rear Panel Connectors
- Drive Positions
- Serial Number Location

1.1

Basic Features

Surveillix® state-of-the-art High Definition Digital Recorders are housed in a high performance and versatile 4U Aluminum Rack-Mount case allowing easy storage of multiple HDDRs for enterprise applications. Every Surveillix HDDR Unit comes equipped with the latest technology:

- Intel® Pentium® IV Processor
- 10/100 Network Interface Card (NIC)
- 256 MB of System Memory
- 32 MB Video Card
- CD-RW Recorder
- 3.5" Floppy Drive
- Full Duplex High-Fi Sound Functionality
- 80 GB Video Storage Drive



1.2 Front Panel Controls and LEDs

The front panel of HDDR unit contains the devices that will be commonly used for data removal, retrieval, and backup replacement. The most common components and buttons are shown below:

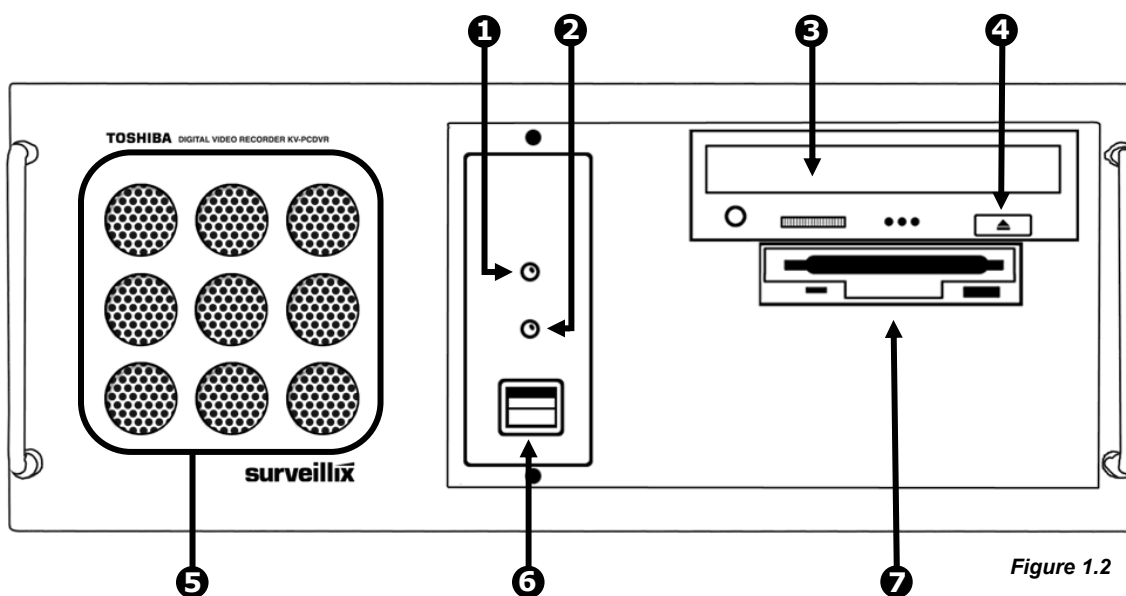


Figure 1.2

Figure 1.2			
1	Hard Drive Activity LED Display	5	Cooling Fan Air Intake
2	Power LED Display	6	ON/OFF Power Switch
3	CDR-W Drive	7	3.5" Floppy Disk Drive
4	CDR-W Open Tray Button		

1.3 Rear Panel Connectors

The rear panel of the HDDR unit contains virtually all of the connectors you will be using. Below is a diagram that outlines the location and description of each connector:

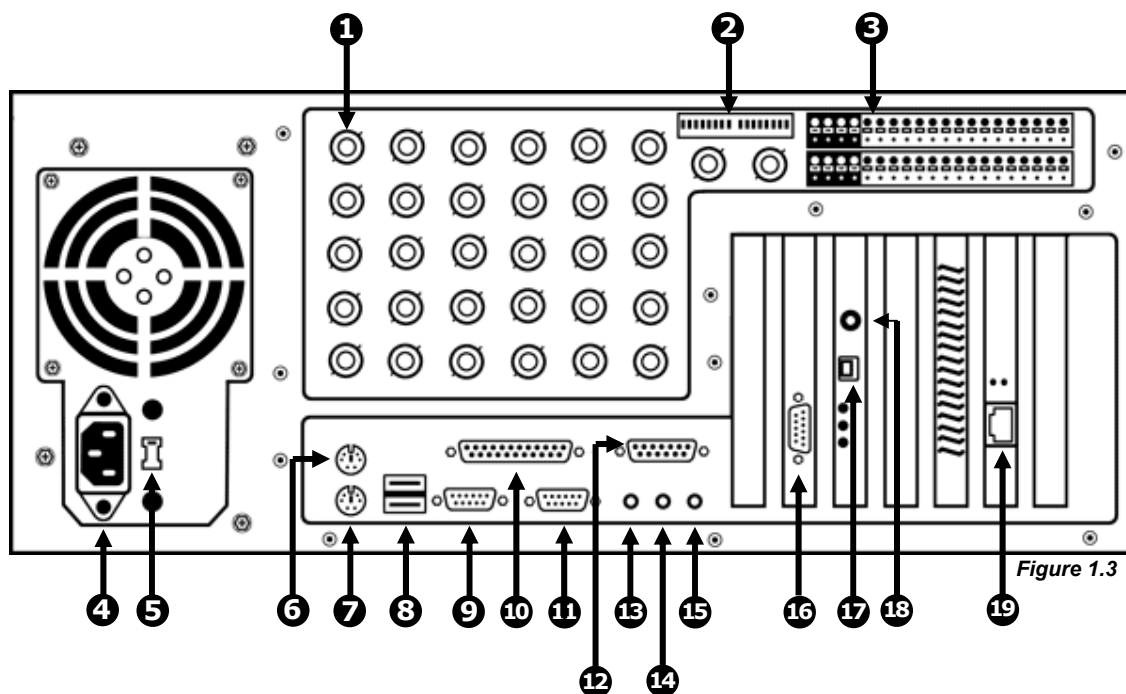


Figure 1.3

Figure 1.3			
1	RG 35 Connector for Camera Input and Looping Outputs	11	DB-9 Serial Input 2
2	75 Ohm Switch	12	DB-15 Serial Port
3	Control Alarm Outputs / Sensor Inputs	13	Audio Speaker Out
4	AC Power Adapter	14	Audio Line In
5	110V / 220V Switch	15	Audio Microphone In
6	PS/2 Mouse Input	16	DB-15 SVGA Monitor Output
7	PS/2 Keyboard Input	17	RS-422 Interface
8	USB Ports	18	RCA Video OUT
9	DB-9 Serial Input 2	19	RJ-45 Network Jack
10	LPT Parallel Printer Port		

1.4

Serial Number



Figure 1.4

Figure 1.4

-
- 1 Part Number** – You can find your model number located on the side of the HDDR unit as shown in *Figure 1.4*.
 - 2 Serial Number** – You can find your serial number located on the side of the HDDR unit as shown in *Figure 1.4*.
-

CHAPTER 2

Getting Started

This chapter includes the following information:

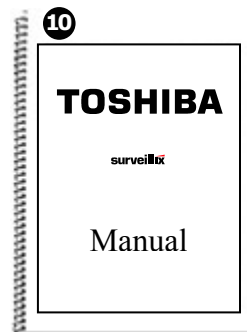
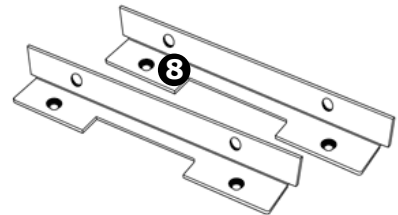
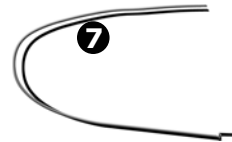
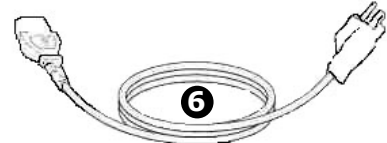
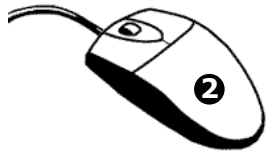
- Included Components
- Setting up your HDDR Hardware
- Optional Components

2.1 Identifying included components

Surveillix® HDDRs come with a mouse, keyboard and selected software and cables. Identify the following components to make sure everything has been properly included with your new HDDR unit. If any of the following items are missing, contact your dealer to arrange a replacement.

Included Component List:

1. HDDR Unit
2. Mouse
3. Keyboard
4. HDDR Software Disc
5. HDDR Repair Disc
6. Power Adapter
7. PTZ Adapter
8. Rackmount Attachments with Screws
9. HDDR Key
10. HDDR Manual



2.2

Keyboard Setup

To attach the keyboard to the HDDR unit, plug the end of the Keyboard into the keyboard PS/2 Port located on the back of the machine. The keyboard PS/2 Port can be identified by the purple color. Refer to the Rear Panel Connectors diagram for more information.



2.3

Mouse Setup

To attach the keyboard to the HDDR unit, plug the end of the Keyboard into the keyboard PS/2 Port located on the back of the machine. The keyboard PS/2 Port can be identified by the purple color. Refer to the Rear Panel Connectors diagram for more information.

The mouse uses a cursor called a pointer. Pointers come in many different shapes but are most commonly shaped like an arrow.

Your mouse has two buttons: a left button and a right button. Quickly pressing and releasing one of these buttons is called clicking. Sometimes you will need to double-click – or click the same button twice quickly.

In this manual, click means to position your mouse point on an icon and to single click the left button. When a right click is required, this is stated clearly. Double-click also refers to the left button.

The ratchet wheel in between the two buttons is added to provide easier scrolling capability. By simply moving the wheel with your index finger, you can quickly move through multiple pages, line, or windows. The wheel may also function as a third button allowing you to quickly click or double-click an icon or a selected item.

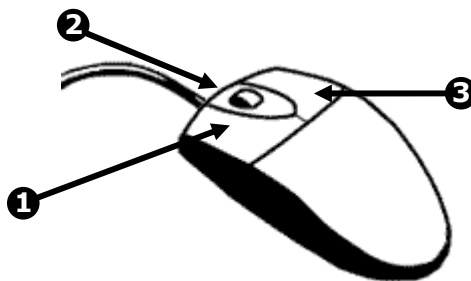


Figure 2.3

Figure 2.3

1	Scroll button / Third Button	3	Right Button
2	Left Button		

2.4 Monitor Setup

Attach the Monitor to the Rear of the HDDR unit using the VGA cable supplied by the Monitor Manufacturer. Refer to your monitor manual for detailed information on how to setup and use it.

NOTE: The monitor you use must be capable of having a screen resolution of 1024 x 768 and display colors of at least 24 Bit

2.5 Power Setup

Attach the AC power cable to the rear of the HDDR Unit. See Rear Panel Connectors for more information.



WARNING: To reduce the risk of electrical shock or damage to the equipment:

- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect the power from the computer by unplugging the power cord either from the electrical outlet or the computer.

2.6 Connecting a Video Source to the HDDR

There are different types of Video Sources that can be plugged into your HDDR unit including DVD players, VHS players, and CCTV Cameras. The back of the HDDR unit contains up to 16 video inputs depending on the HDDR model. The connectors use the BNC standard.

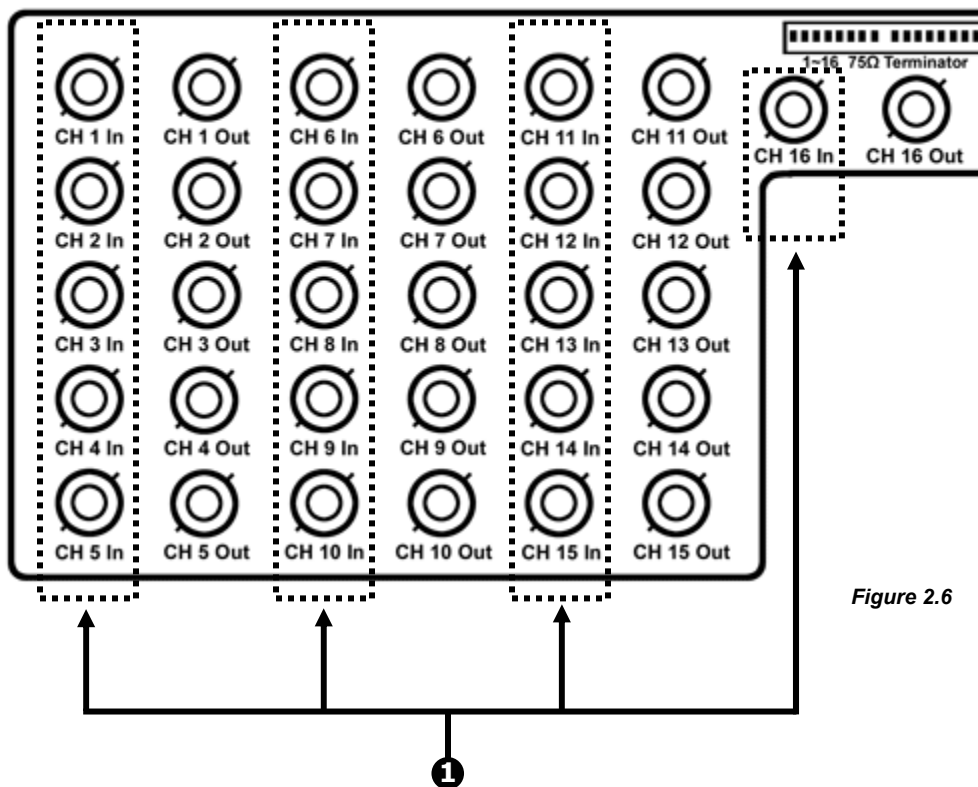


Figure 2.6

Figure 2.6

-
- 1 Video Inputs** – The Video inputs are RG-53 BNC connectors. Simply plug one end into your video source (DVD, Camera, etc.) and plug the other end into the desired BNC input on the HDDR unit.
-

2.7

Optional Components

To fully utilize your HDDR unit's potential, several optional Surveillix components are listed below. Contact your dealer for more information.

-
- 1) **Extra Video Storage Hard Drive** – Each HDDR unit has a virtually unlimited storage potential. By adding additional Video Data Hard Drives you can extend the amount of Video Data your HDDR system can store before overwriting older data.

 - 2) **100MB / 250MB Zip Drive** – Zip drives are an easy way to transfer small amounts of Video Data. Often times it is all that is needed when delivering the extracted video to Law Enforcement.

 - 3) **DVD ROM Recordable Drive** – DVD Recorders are an exceptional way to store large amounts of Video Data easily. Each DVD can store up to 5 Gigabytes of Video Data.

 - 4) **USB External Hard Drive** – An easy way to extract large amounts of Video Data from the HDDR unit is to use an USB External Hard Drive. This drive connects to the USB port on the HDDR unit and can be attached to any computer with an USB port.

 - 5) **Fiber Network Interface Adapter** – A Fiber Network Adapter is used in enterprise network environments where large amounts of data are transferred across the LAN. If large groups of people are logging in remotely across the LAN, the Fiber adapter will speed the data transfer.

 - 6) **Gigabit 10/100/1000 Network Interface Adapter** – A Gigabit Ethernet adapter can transfer data up to 10 times faster than standard fast Ethernet which comes standard with the HDDR unit. This speed can be helpful if many people access the HDDR remotely.

CHAPTER 3

HDDR Basics

This chapter includes the following information:

- Turning the HDDR on and off
- Becoming familiar with the Display screen
- Defining Screen Divisions

3.1 Turning on the HDDR

Once the hardware has been properly connected (See Chapter 2) it is time to turn on the power. To turn on the power follow these steps:

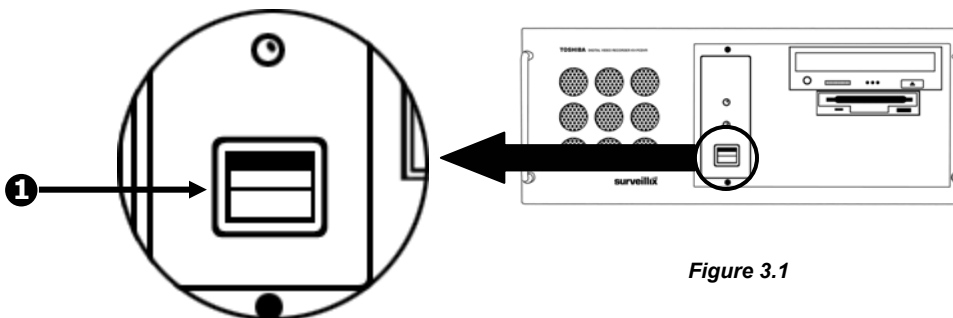


Figure 3.1

Turning the HDDR unit ON

- 1) Turn on the monitor and any external peripherals (ex. Printers, External Storage Devices, etc.) connected to the HDDR unit.
- 2) Turn on the main power switch located on the front of the HDDR unit as shown in Figure 3.1. The HDDR will run a series of self-tests. After two or three minutes a series of messages may be displayed as the various hardware and software subsystems are activated. Under normal circumstances you should not be asked to respond to these messages. If you are asked to respond to the messages (adding a Printer, Monitor, etc for the first time) follow the instructions carefully.

After this finishes, the Surveillix HDDR software should load automatically and bring you to the main screen.

3.2 Turning off the HDDR

Turning the HDDR unit OFF

- 1) To turn off the HDDR unit, select the Exit button from the main screen. This will prompt you whether you wish to exit the program or not. Select yes. The HDDR unit will shut itself off automatically once this is done. The HDDR unit may take several minutes to shut down completely.



CAUTION: Always be sure to follow the proper procedures when turning off the power to the HDDR unit. NEVER disconnect the power to the HDDR unit while it is still running or in the process of shutting down. Doing so can cause data loss, file corruption, system instability and hardware failure.

3.3 Display Screen

Each time the HDDR is restarted, the program defaults to the Display screen. The following diagram outlines the buttons and features used on the Display screen. You should become familiar with these options as this is the screen that will be displayed the majority of the time.

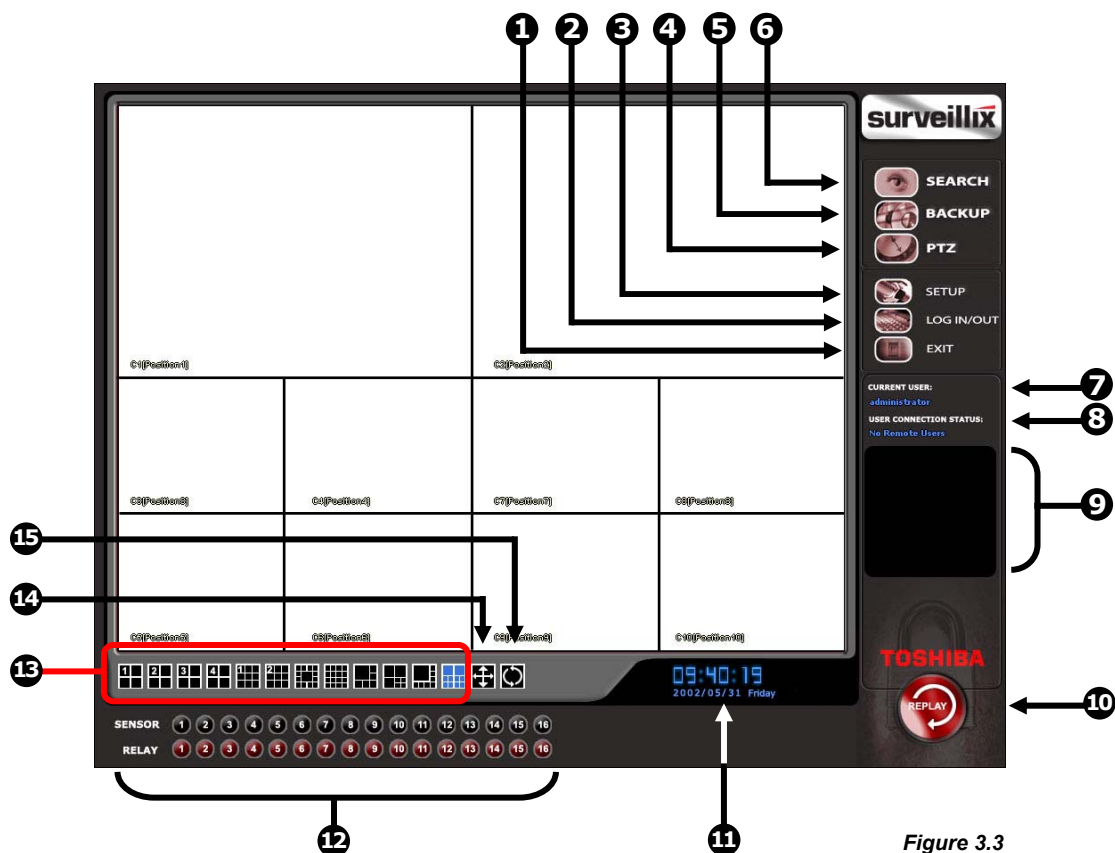


Figure 3.3

Figure 3.3

- | | |
|---|--|
| 1 | Exit Button – The exit button brings up several options, including Shut Down, Restart, Log On, Log Off and Restart in Windows Mode. |
| 2 | Log In / Log Out – This button Logs the current user off and allows you to Log in using a different user account. |
| 3 | Setup – This Brings up the setup menu from which all customizable settings can be edited. |
| 4 | PTZ – Opens the PAN / TILT options for controlling PTZ enabled Cameras. |
| 5 | Backup Button – Brings up the Backup options. |
| 6 | Search Button – Displays search features that allow you to search through previously recorded video. |
| 7 | Current User – Displays the name of the user currently logged in to the HDDR. |
| 8 | Network Information – Displays whether a Remote User is logged in. |

- ⑨ **Remote User Display** – Displays the users connected to the HDDR.
- ⑩ **Instant Replay** – This button is a shortcut that instantly jumps into Search Mode and begins playing the video backwards.
- ⑪ **Date/Time** – Displays the current time and date. This date and time is stamped into the recorded video and is displayed whenever the video is played back.
- ⑫ **Sensor Status Bar** – Displays the Sensor status for each camera that is setup to use Sensors.
Control Output Status and Activation Bar – The Relay buttons fire the Output Relays. The Output Relays can be hooked up to external alarms, set to trigger an audio alarm, send a phone call, etc.
- ⑬ **Screen Division Buttons** – The Screen Division buttons allow you to view one or more sets of cameras at a time. They are organized in several different groups such as.
- ⑭ **Full Screen** – Displays the video full screen.
- ⑮ **Loop** – Pressing the Loop button rotates through the Screen Divisions.

3.4

Camera View

The Camera status for each camera is displayed next to the Camera number (or name) on the Video Display Area. The following are

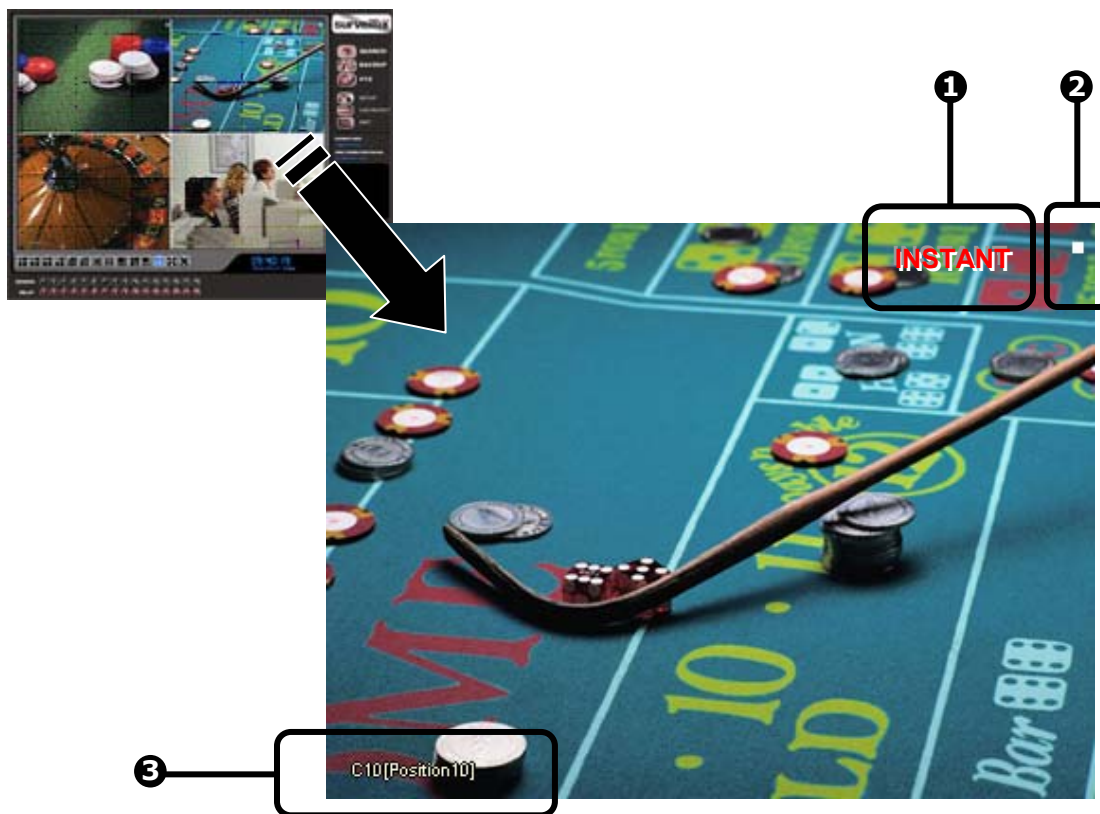


Figure 3.4

Figure 3.4




- ① **Camera Number and Name** – Displays the camera number and the custom name given to the camera.

- ② **Recording Status** – Displays the current recording status of the camera using symbols. (See Section 3.5)
- ③ **Special Recording** – Displays text relating to the type of recording that is occurring. (See Section 3.5)

3.5

Recording Status Indicator

The Camera status for each camera is displayed next to the Camera number (or name) on the Video Display Area. The following are the different states for each camera:

-  **Recording** – A red light is displayed when the camera is currently being recorded to the HDDR unit.
-  **Motion Detection** – A blue light is displayed when a camera (set up for motion detection) detects motion.
-  **Display** – This is displayed when the camera is currently not being recorded to the HDDR unit.











There are several different types of HDDR 'Special Recording'. When this happens text is displayed on the camera indicating what kind it is. These are as follows:










- SENSOR** – Sensor is displayed when a sensor, associated with a given camera, is activated.
- INSTANT** – Instant is displayed when a user activates the instant recording option.

3.6

Screen Division Menu

The Screen Division menu allows you to view cameras full screen by rotating one by one, four by four, eight by eight or by viewing four, eight or 16 at a time. The button options are shown below.

-  **1st Four Cameras View** – Displays cameras 1-8 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Camera View Option.
-  **2nd Four Cameras View** – Displays cameras 5-8 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Camera View Option.
-  **3rd Four Cameras View** – Displays cameras 9-12 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Camera View Option.
-  **4th Four Cameras View** – Displays cameras 13-16 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Camera View Option.
-  **5th Four Cameras View** – Displays cameras 17-20 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
-  **6th Four Cameras View** – Displays cameras 21-24 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
-  **7th Four Cameras View** – Displays cameras 25-28 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
-  **8th Four Cameras View** – Displays cameras 29-32 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
-  **1st Eight Cameras View** – Displays cameras 1-8 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
-  **2nd Eight Cameras View** – Displays cameras 9-16 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.

	1st Sixteen Cameras View – Displays cameras 1-8 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
	2nd Sixteen Camera View – Displays cameras 9-16 in the Video Display Area. To return to a different Multi-Camera View, select a different Screen Division option from the Screen Division menu.
	32 Camera View – Displays cameras 1-32 in the Video Display Area. To return to a different Multi-Camera View, select a different Camera View Option.
	Multi-Camera View – Displays a group of cameras within the Video Display Area.
	Multi-Camera View – Displays a group of cameras within the Video Display Area.
	Multi-Camera View – Displays a group of cameras within the Video Display Area.
	Multi-Camera View – Displays a group of cameras within the Video Display Area.
	Full Screen – The Full Screen Option allows you to view the Video Display Area using the entire viewable area on the monitor. When this is selected, no menu options are visible. You can activate the Full Screen Option by clicking on the Full Screen Button within the Screen Division Menu. You can deactivate it by pressing the Esc key (on the keyboard).
	Loop – Pressing the Loop button rotates through the Screen Divisions.

CHAPTER 4

Setup Options

This chapter includes the following information:

- Setup Overview
- Channels
- Color
- Schedule
- Speed
- Motion Detect
- Password
- Pan/Tilt

4.1 Setup Overview

The Setup options allow you to optimize your HDDR unit by adjusting things like camera names, reboot schedules, recording schedules and more. It is extremely important that you setup your HDDR correctly for several reasons.

- **Recording Schedules** – By optimizing the recording schedule you can increase the amount of pertinent recorded video that is saved on the HDDR *and* keep it longer. You can optimize the type of recording done by adding motion detection to this as well, again increasing the amount of useful video.
- **HDDR health** – By setting up routine reboot schedules you can ensure that the HDDR unit remains in perfect working order.
- **HDDR Access** – By setting up the access passwords you can tightly control the types of access an individual may have. This ensures the security and integrity of the HDDR unit.
- **Camera Naming** – By naming each camera you can easily identify the location and any other pertinent information that may be helpful simply by viewing it on the Video Display Area.
- **Adjusting Camera Color** – By adjusting each cameras color settings you can optimize the clarity and detail that is recorded.

4.1.1 Setup Screen Overview

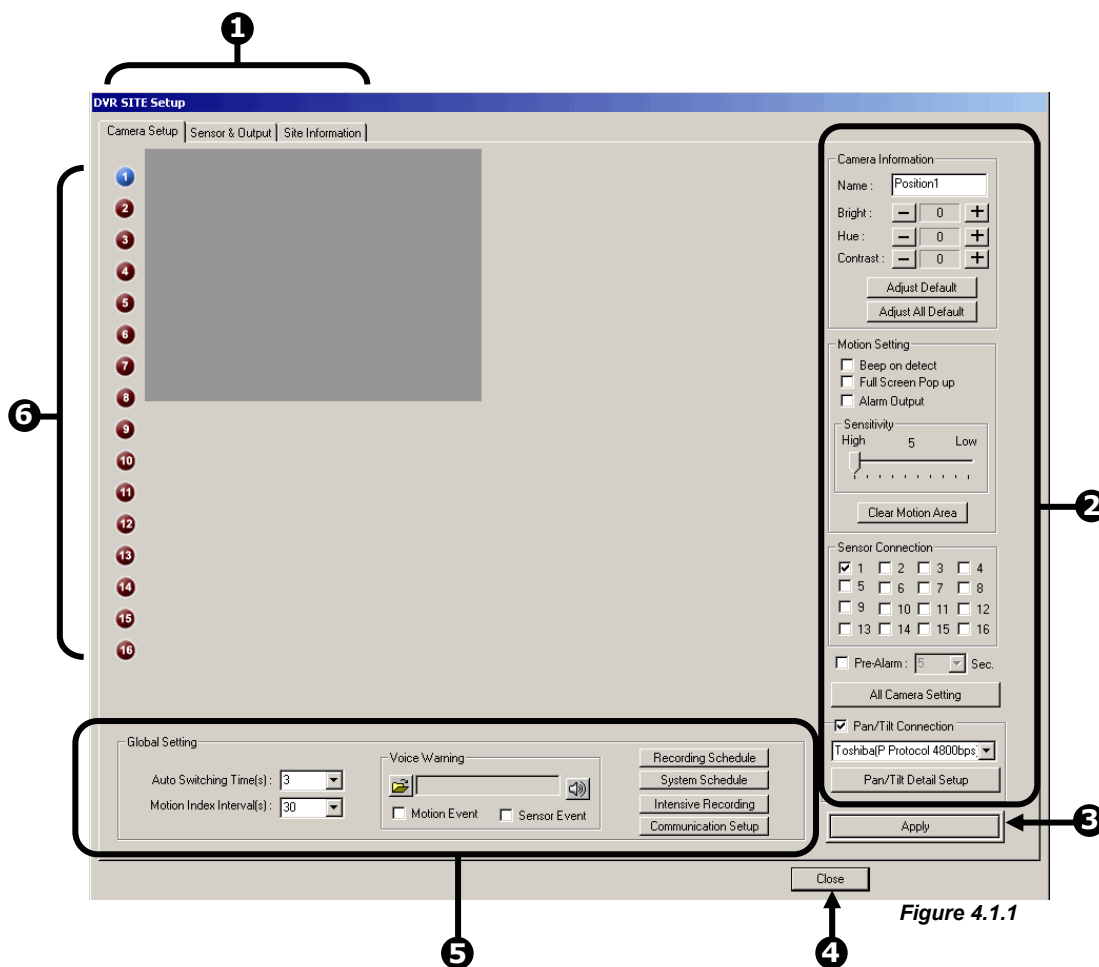


Figure 4.1.1

Figure 4.1.1

1	Setup Options – Allows you to toggle between different setup screens.
2	Individual Camera Settings – Displays the options for adjusting a camera's Color Settings, Sensor Connections, Motion Detection Zones, etc.
3	Apply – Saves settings.
4	Close – Exits setup.
5	Global Settings – A series of setup options that affect all cameras.
6	Camera Selector – Selects the current camera to be edited.

4.2

Individual Camera Settings Overview

Several Setup options are available for each camera individually. These options are listed below.

Figure 4.2

1	Camera Information – Allows you to adjust the name and color settings for each camera.
2	Motion Settings – Displays options for editing each camera's Motion Detection settings.
3	Sensor Connections – Allows you to attach one or more sensor connections to each camera.
4	Pre-Alarm – Allows you to record a section of video just prior to Motion or Sensor activation.
5	All Camera Setting – Selecting this option copies the settings for the selected camera to all the cameras.
6	Pan/Tilt Detail Setup – These options setup a PTZ camera to the HDDR unit and allow you to create Presets and Tours. (Refer to PTZ Chapter in this manual)

The screenshot shows the 'Individual Camera Settings' window. On the left, a vertical list of numbered callouts (1-6) is connected by brackets to specific sections of the interface:

- 1** points to the **Camera Information** section, which includes fields for Name (Position1), Brightness, Hue, and Contrast, each with minus, zero, and plus buttons. Below these are 'Adjust Default' and 'Adjust All Default' buttons.
- 2** points to the **Motion Setting** section, which includes checkboxes for 'Beep on detect', 'Full Screen Pop up', and 'Alarm Output'. It also features a 'Sensitivity' slider set to 5 (between High and Low) and a 'Clear Motion Area' button.
- 3** points to the **Sensor Connection** section, which displays a 4x4 grid of checkboxes for sensors 1 through 16. Sensor 1 is checked.
- 4** points to the 'Pre-Alarm' checkbox and the 'Pre-Alarm : 5 Sec.' dropdown menu.
- 5** points to the 'All Camera Setting' button.
- 6** points to the 'Pan/Tilt Connection' section, which includes a checked 'Pan/Tilt Connection' checkbox, a dropdown menu showing 'Toshiba(P Protocol 4800bps)', and a 'Pan/Tilt Detail Setup' button.

Figure 4.2

4.2.1 Camera Information

Several Setup options are available for each camera individually. These options are listed below.

Figure 4.2.1

- ① **Name** – Allows you to specify a name for each camera.
- ② **Bright** – Adjusts the Brightness of the selected camera.
- ③ **Hue** – Adjusts the Hue of the selected camera.
- ④ **Contrast** – Adjusts the Contrast of the selected camera.
- ⑤ **Adjust Default** – Adjust the color settings for the selected camera back to the System default.
- ⑥ **Adjust All Default** – Adjusts the color settings for ALL cameras to the System default.

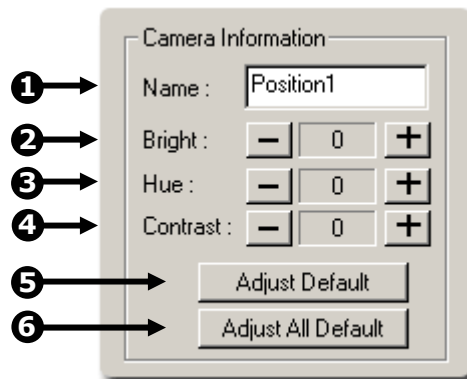


Figure 4.2.1

4.2.2 Motion Setting

The HDDR unit allows you to adjust several different Motion Settings.

Figure 4.2.2

- ① **Beep on Detect** – When motion is detected an alarm is sounded.
- ② **Full Screen Pop-Up** – When Motion is detected, the camera is brought up in full screen mode.
- ③ **Alarm Output** – Enables the Alarm Output. The Alarm Output is always defaulted to Control Output #16. Control Output #16 is System designated default for an external alarm.
- ④ **Sensitivity** – Adjusts the sensitivity within the designated Motion Area.
- ⑤ **Clear Motion Area** – Clears all Motion Areas for the selected camera.

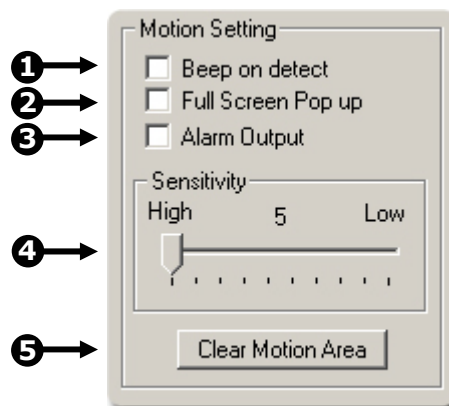


Figure 4.2.2

4.2.2.1 Creating a Motion Area

Creating a Motion Area

- 1) Place the mouse pointer at the upper left hand corner of the area you want to designate, press and hold down the left mouse button, drag the mouse. Let go of the button when the Motion Area is the size you want it to be.
- 2) Continue creating as many Motion Areas as you wish. You can resize them and move them by dragging the sides and corners of the Motion Area.



4.2.3 Sensor Connection

You can connect one or more Sensors to the selected camera by checking the box next to the sensor(s). Connecting a sensor to the camera allows you to activate both Standard Recording and Intensive Recording.

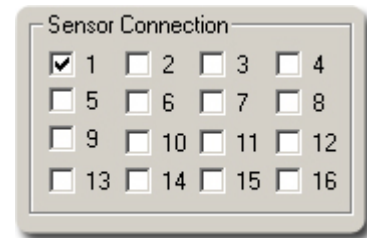


Figure 4.2.3

4.3 Global Settings Overview

Adjusting Global Settings will affect all cameras. Below are the Global Settings options.

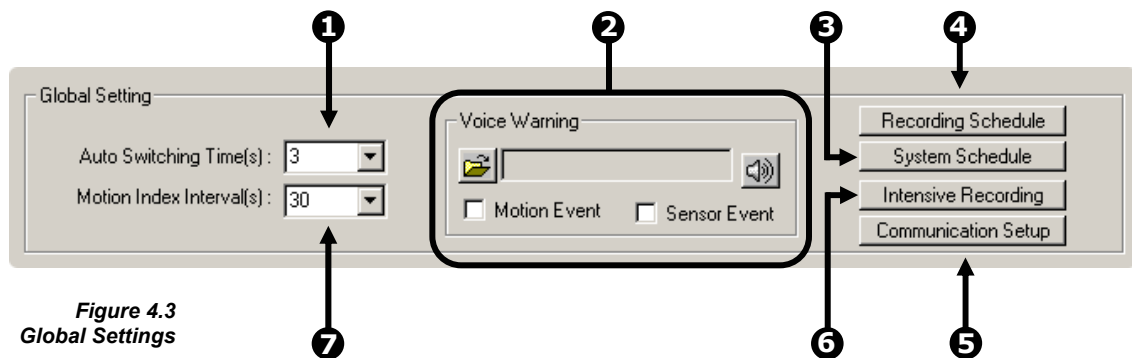


Figure 4.3
Global Settings

Figure 4.3

- 1 Auto Switching Time(s)** – When the Loop button is activated, the Auto Switching Time specifies the amount of time that elapses before switching to the next Screen Division group.
- 2 Voice Warning** – Allows you to use an audible warning (.wav Sound Clip) for when Motion or Sensors are activated.
- 3 System Schedule** – Opens the System Schedule window which allows you to specify the time and dates to record and the type of recording which is to be done (Motion, Continuous, etc).
- 4 Recording Schedule** – Opens the Recording Schedule window which allows you to adjust the Frames per Second for each camera.
- 5 Communication Setup** – Opens the Communication Setup window which contains options and settings for allowing remote access, Internet Broadcasting and more.
- 6 Intensive Recording** – Opens the Intensive Recording window which allows you to specify the Frames per Second to be recorded.
- 7 Motion Index Interval** – Specifies the amount of time to record once Motion has been activated.

4.3.1 Voice Warning

The HDDR unit allows you to play a sound file when either a Motion event or Sensor event occur. This file can be a custom created sound file that is unique to your application. The selected WAV file is played through speakers attached to the HDDR unit.

Figure 4.3.1

- | | |
|---|---|
| ❶ | Open – Allows you to select the location of the WAV file to use. |
| ❷ | Motion Event – Enables the Voice Warning on Motion Events. |
| ❸ | Sensor Event – Enables the Voice Warning on Sensor Events. |
| ❹ | Play Selected WAV – Plays the selected WAV file. |

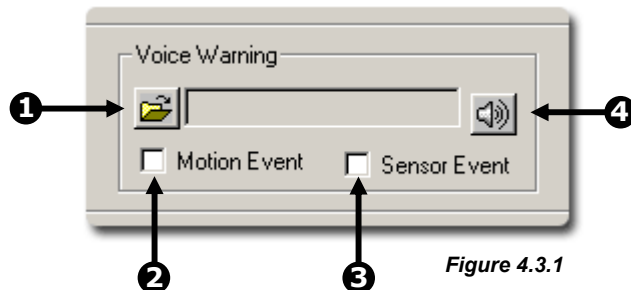


Figure 4.3.1

4.4 Recording Schedule

The Channel Setup option allows you to turn cameras on/off as well as rename them to an identifiable name or number.

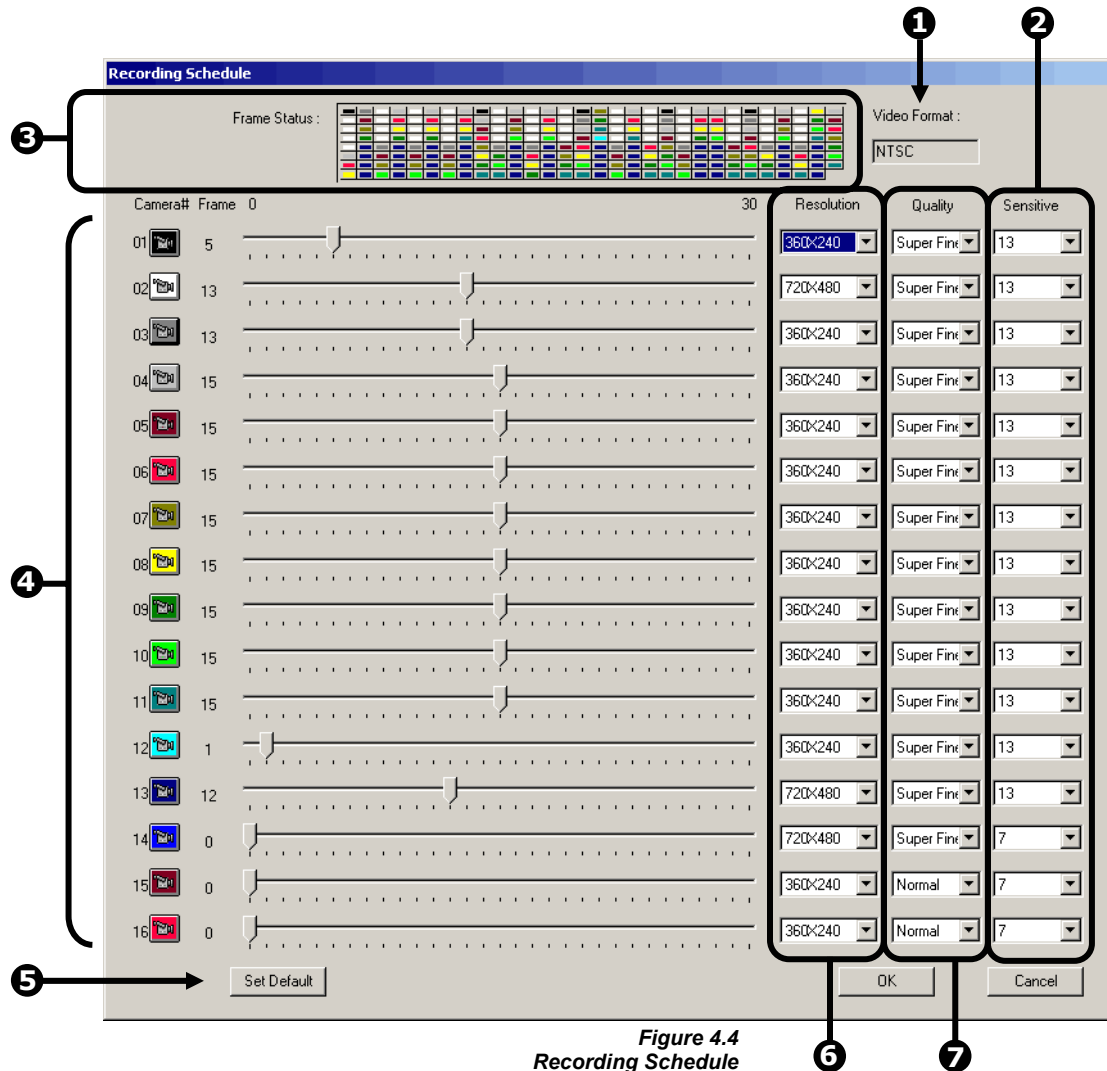


Figure 4.4
Recording Schedule

Figure 4.4

- 1** **Video Format** – Displays the Video Format (NTSC/PAL).
- 2** **Sensitivity** – The Sensitivity adjusts the rate at which the Keyframe refreshes. This option directly affects the codec being used to record the video. Adjusting this setting can have drastic negative effects on the quality of the video. It is highly recommended that this setting always be left at the default setting unless so instructed by a system administrator.
- 3** **Frame Status** – Displays the layout and order of the frames being recorded. The Frame Status represents a One Second period of time with 240 colored blocks inside. Each block represents one frame and each color represents a camera. (See Camera Number) The layout shows the recording order for each second.
- 4** **Camera Number** – The cameras are given different colors to help distinguish themselves when viewing the Frame Status. You can adjust the recorded Frames per Second by sliding the bar to the left and right.
- 5** **Set Default** – Selecting this option resets all camera Frames and resolutions to the default settings.
- 6** **Resolution** – Displays the available Resolution options.

- 7 Quality** – This settings affects the quality of the video. Increasing the quality of the camera can reduce the amount of pixilation within the image considerably, but also increases the file size.

4.5

Systems Schedule

The Recording Schedule Window allows you to create different recording schedules based on the day, time, and type of recording you wish to use. In addition this window also contains the System Restart options that allow you to perform basic system maintenance by automatically scheduling the HDDR to restart itself periodically.

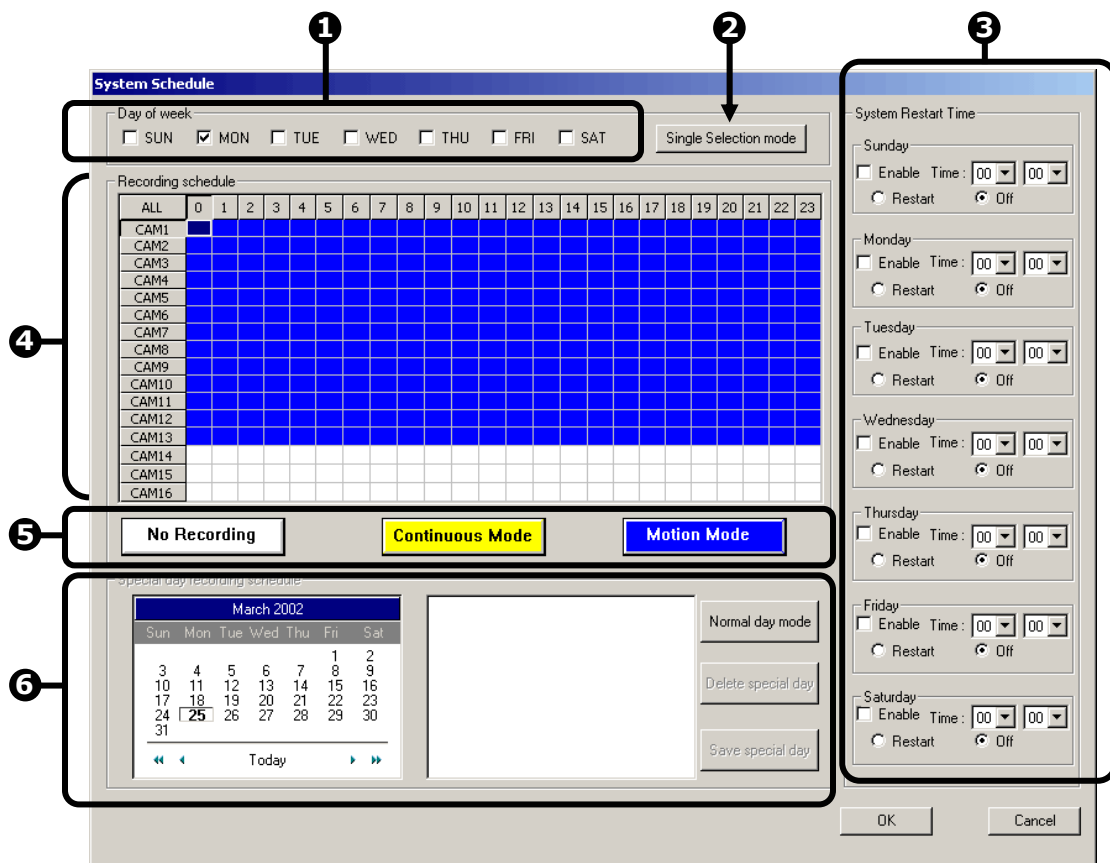


Figure 4.5
System Schedule

Figure 4.5

- 1 Day of the Week** – Selects the day of the week for the schedule being made.
- 2 Single Selection Mode** – Selects all days of the week at once.
- 3 System Restart Time** – Displays the restart options. The HDDR unit allows you to specify the unit to be automatically restarted one or more days a week.
- 4 Recording Schedule Window** – Displays and allows you to edit the current Recording Schedule.
- 5 Recording Mode** – Selects the Recording Mode. The Recording Modes are 'NO RECORDING' 'CONTINUOUS RECORDING' and 'MOTION RECORDING'
- 6 Special Day Recording** – Allows you to create special recording schedules for specific days. You can create as many special.

4.5.1 Creating a Recording Schedule

Creating a Recording Schedule

- 1) Select a day to begin creating the schedule for -or- Select the SINGLE SELECTION MODE button to create the schedule for all the days of the week at once.
- 2) Highlight the time-blocks within the Recording Schedule Window for the camera(s) you wish to schedule. Once the desired Time-Blocks are highlighted, press a RECORDING MODE button.
The Time-Blocks should now appear Blue for Motion, Yellow for Continuous and White for No Recording

Leave Cameras that will be recording with Sensor Detection set to 'No Recording' for the specified time block(s).

4.6 Special Day Schedule

You can create days that have a unique recording schedule. You may wish to create these on days that are 'not typical' such as Holidays, Special Events, etc.

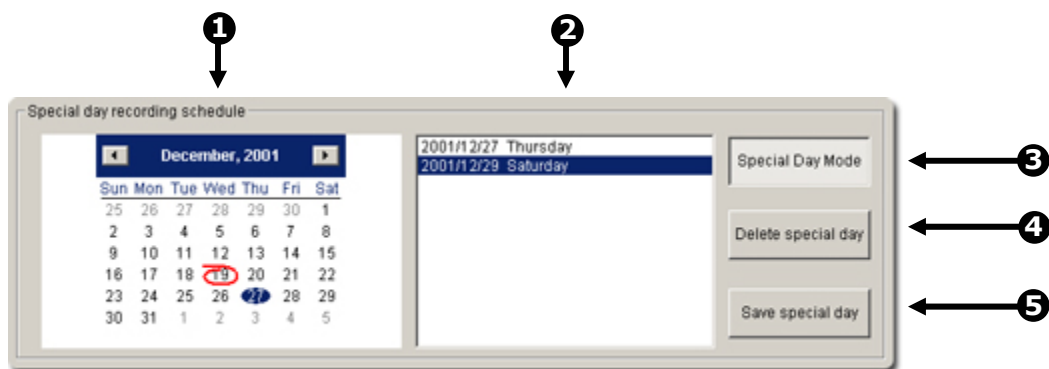


Figure 4.6

Figure 4.6

- ① **Calendar** – Displays the current day in a red circle.
- ② **Special Day Schedules** – Displays the current saved.
- ③ **Special Day (Enter/Exit Edit Mode)** – Enters / Exits the Special Day Mode. Once in Special Day Mode you can create, edit and delete Special Days.
- ④ **Delete Special Day** – Deletes the selected Special Day Schedule.
- ⑤ **Save Special Day** – Saves the selected Special Day Schedule.

4.6.1 Creating and Editing a 'Special Day' Schedule

Creating a 'Special Day' Schedule

- 1) Press the 'NORMAL DAY MODE' button to enable the 'SPECIAL DAY MODE'.
- 2) Select a day from the Calendar by left clicking on the day with the mouse. The selected day should appear in a blue highlighted oval.

- 3) Highlight the time-blocks within the Recording Schedule Window for the camera(s) you wish to schedule. Once the desired Time-Blocks are highlighted, press a RECORDING MODE button.
- 4) When you have finished creating the schedule press the 'SAVE SPECIAL DAY' button. The special day should now appear as a date within the Special Day Schedules.

Deleting a 'Special Day' Schedule

- 5) Select a Special Day from the Special Day Schedules List and press the 'DELETE SPECIAL DAY' button.

4.7 System Restart Time

Allowing the HDDR unit to automatically restart itself can be an important part of basic maintenance. When the HDDR unit restarts, memory, cache, and other HDDR systems are flushed and renewed. This creates an overall better functioning system.

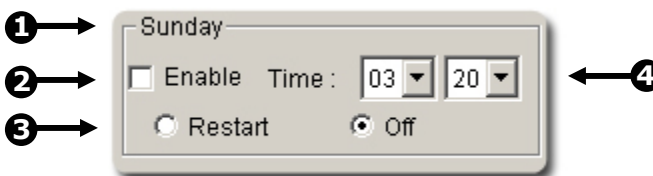


Figure 4.7

Figure 4.7

- 1 Day of the Week – Displays the Day for the settings being adjusted.
- 2 Enable – Enables the HDDR to shut down the computer at the time specified. This option alone does NOT restart the HDDR, it just simply turns it off.
- 3 Restart / OFF – Enables the HDDR to restart itself once it has been shut down.
- 4 Time – Specifies the time to Shut Down or Restart the HDDR unit.

4.8 Intensive Recording Overview

The Intensive Recording Option allows you to increase the Frames Per Second and the resolution of any camera recording using sensor activation. When the intensive recording is activated, the resolution of the remaining cameras is immediately reduced to 360x240 and the Frames per second to a user specified level. This is done to guarantee that the Frames Per Second and Resolution will be set correctly and not exceed the HDDR limitation.

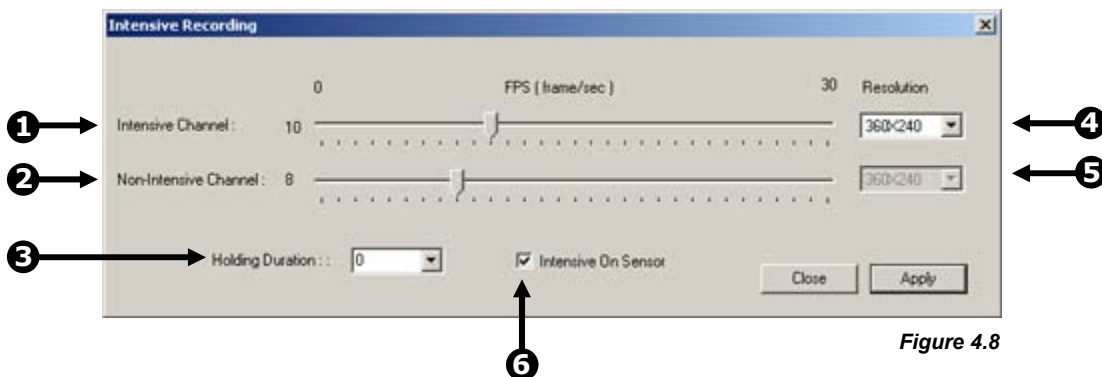


Figure 4.8

Figure 4.8

1	Intensive Channel – Adjusts the Frame Rate for the Intensive Channel.
2	Non-Intensive Channel – Adjusts the Frame Rates for the Non-intensive Channels (the channels will drop their current settings and be forced to use this setting).
3	Holding Duration – Adjusts the amount of time to hold the Intensive Recording active.
4	Intensive Channel Resolution – Adjusts the Resolution for the Intensive Channel.
5	Non-Intensive Channel Resolution – The HDDR automatically adjusts the Non-Intensive Channels down to the system default. This setting cannot be changed.
6	Intensive On-Sensor – This setting enables the association of Intensive Recording to sensors.

4.8.1 How to use Intensive Recording

The Intensive Recording option is setup as an 'All or Nothing'. This means that once enabled (associated with sensors), all cameras that are associated with sensors will activate the Intensive Recording.

To activate the Intensive Recording option, follow these steps.

Activating Intensive Recording

- 1) Inside Setup, select the camera you wish to use and then enable the appropriate sensor (See Section 4.2.3) you wish to associate to it.
- 2) Open the Intensive Recording Options. Enable the Intensive-On-Sensor option and then select the desired Frames Per Second for both the Intensive and Non-Intensive Channels. You can also adjust the Resolution and the holding duration for the Intensive Channel.
- 3) Close the Intensive Recording window by selecting the APPLY button.
- 4) Open the Sensors and Outputs window.
- 5) Enable the sensor you associated with the Intensive Recording by placing a check in the box next to it.
- 6) Press the APPLY button and exit out of setup

4.9 Communication Setup

The Communication Setup allows you to adjust settings such as Ports, Emergency Agent IP Addresses, IDVR Users and NDMS identification.

The screenshot shows the 'Communication Setting' dialog box. It has a title bar 'Communication Setting' and a close button. The dialog is divided into several sections:

- Top Section:** Contains a checkbox 'Disable Remote Control' (callout 1), a 'Quality' dropdown menu set to 'NORMAL' (callout 4), and a 'Resolution' dropdown menu set to '360*240' (callout 5).
- Network Setup Section (callout 2):** Contains fields for 'Emergency IP' (0 . 0 . 0 . 0), 'TimeOut Value' (60), 'Center Port' (2015), 'Image Port' (2002), 'Search Port' (2003), and 'Emergency Port' (2001). Each port field has a range '(1024 - 5000)' below it.
- PPP Setup(Emergency) Section (callout 6):** Contains a checkbox 'Use PPP', 'Password' and 'Confirm' text boxes, a 'Phone Number' text box, and a 'Modem Select' dropdown menu set to 'N/A'.
- Web Function Section (callout 3):** Contains a checked checkbox 'Web Viewer(IDVR)' and an 'iDVR Port' text box set to '3001'.
- NDMS Control Section (callout 7):** Contains a checked checkbox 'Use NDMS' and a 'Group Code' text box set to '01'.
- Bottom:** 'OK' and 'Cancel' buttons.

Figure 4.9
Communication Setup

Figure 4.9

- | | |
|----------|--|
| 1 | Disable Remote Control – This setting enables or disables access to the HDDR from remote connections. |
| 2 | Network Setup – Specifies the Ports to use when transferring data, as well as defines the Emergency Agent IP Address. |
| 3 | Web Function – Enables the use of the IDVR Web interface as well as defines users who can access it. |
| 4 | Quality – Adjusts the resolution quality when transferring video to a remote client. |
| 5 | Resolution – Adjusts the resolution of the images being sent to remote clients. By setting the resolution low, the images will be sent faster, however, the image quality will be reduced considerably. |
| 6 | PPP Setup (Emergency) – Defines the modem and PPP information to dial to a remote client when the Emergency Agent is activated. |
| 7 | NDMS Control – This option enables the use of NDMS and associates it to an NDMS group. |

4.10 Sensor and Output

The Sensor and Output Window allows you to enable, disable and configure Sensors and Control Outputs as well as adjust Emergency Agent options.

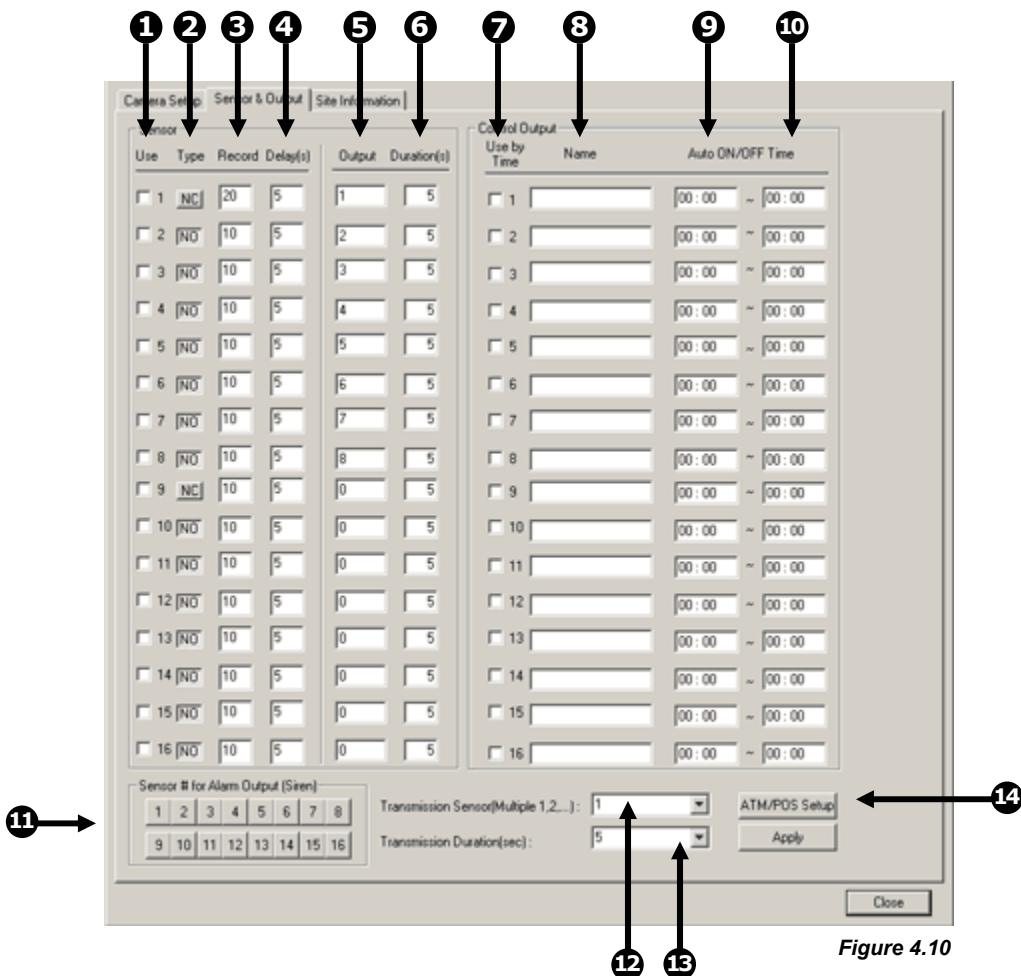


Figure 4.10

Figure 4.10

- 1** **Use** – Enables/Disables the Sensor for use.
- 2** **Type** – Selects whether the Sensor will be Normally Open (NO) or Normally Closed (NC).
- 3** **Record** – Specifies the time period (in seconds) to record once the Sensor is tripped.
- 4** **Delay(s)** – Adjusts the amount of time to ignore the sensor if it is continuously activated.
- 5** **Output** – Selects the Control Output to activate once the Sensor has been tripped. You can select multiple Control Outputs by placing a comma between numbers. (ex. 1,2,6,13)
- 6** **Duration** – Adjusts the amount of time (in seconds) that the Control Output will remain activated.

-
- 7 Use by Time** – This option Enables/Disables the Use by Time feature. When activated the Use by Time feature allows you to specify a time period that the Control output will be operational. For example you could disable the control output during work hours so that alarms will not go off when a door is opened and a sensor is tripped.
 - 8 Name** – This option allows you to assign a meaningful name the Control Output. (ex. Warehouse Siren)
 - 9 Auto ON** – The time at which the Control Output will be available for use.
 - 10 Auto OFF** – The time at which the Control Output will be disabled and not available for use.
 - 11 Sensor Number for Alarm Output (Siren)** – Associates the selected Sensor to the Siren (Control Output #16). When the sensor is tripped the Siren is immediately activated.
 - 12 Transmission Sensor** – Specifies which sensors will activate the Emergency Agent software. You can specify more than one sensor by separating them with commas. (ex. 2,4,13,15,16)
 - 13 Transmission Duration** – Specifies the amount of time (in seconds) to transmit the video in the Emergency Agent Software.
 - 14 ATM/POS Setup** – This option allows you to change the settings that connect an ATM /POS device to the HDDR.
-

4.11 Site Information

The Sensor and Output Window allows you to enable, disable and configure Sensors and Control Outputs as well as adjust Emergency Agent options.

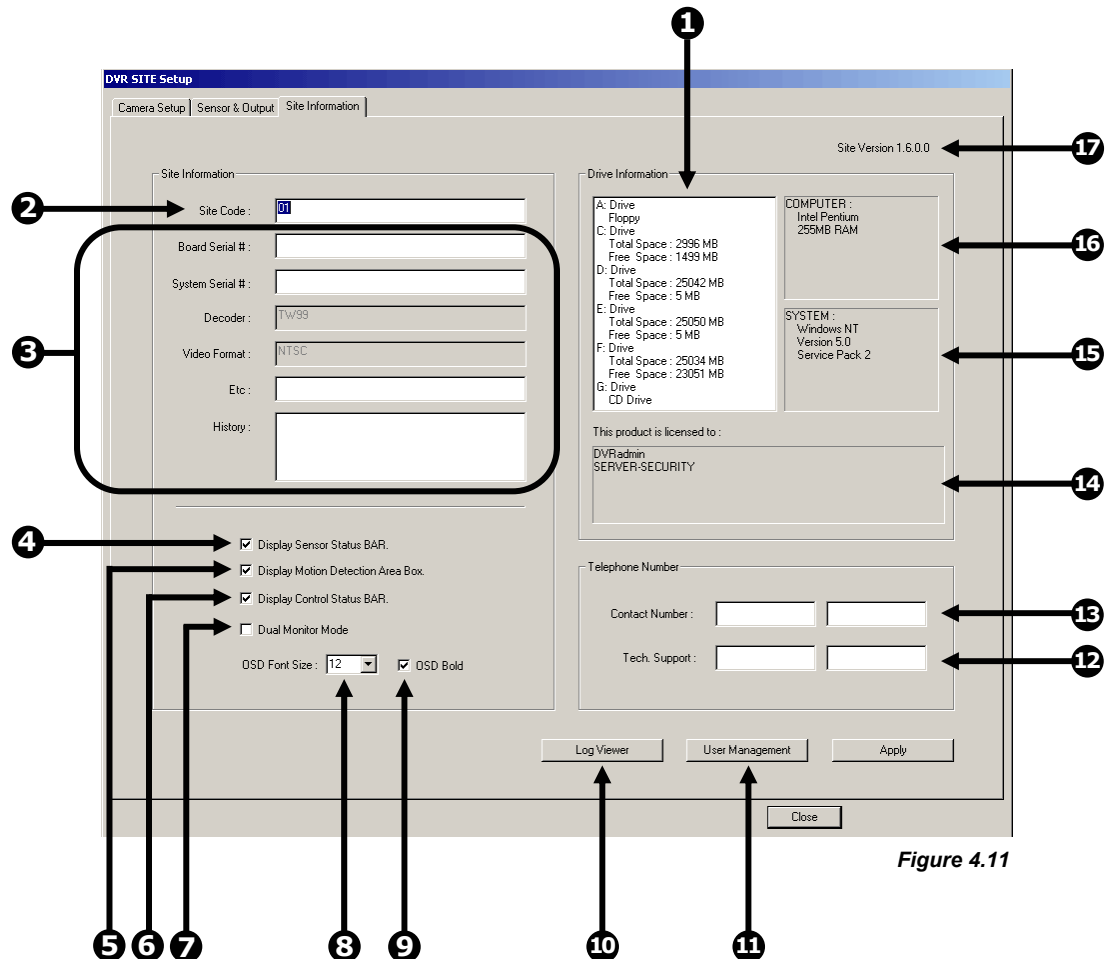


Figure 4.11

Figure 4.11

- | | |
|----------|--|
| 1 | Drive Information – Displays the Total Space and Free Space of the Drives installed in the DVR. |
| 2 | Site Code – A user-specified unique identification name that is used by other DVR software to connect to the DVR. (Remote, Emergency Agent, NDMS) |
| 3 | Site Information – Displays misc. information about the DVR. |
| 4 | Display Sensor Status BAR – Enables/Disables the Sensor Status Bar on the Main Display Screen. (See section 3.3) |
| 5 | Display Motion Detection Area Box – Selects the Control Output to activate once the Sensor has been tripped. You can select multiple Control Outputs by placing a comma between numbers. (ex. 1,2,6,13) |
| 6 | Display Control Status Bar – Enables/Disables Control Status Bar on the Main Display Screen. (See section 3.3) |
| 7 | Dual Monitor Mode – This option is only used when DUO-Mon monitors are used on the DVR. |

- 8 OSD Font Size** – This option allows you to adjust the On Screen Display Font size for cameras.
- 9 OSD Bold** – This option makes the OSD Font Bold.
- 10 Log Viewer** – This option opens the Log Viewer Window which allows you to view the DVR System Logs.
- 11 User Management** – This option opens the User Management Window. User Management allows you to create, edit and delete DVR user accounts.
- 12 Tech Support** – Displays the Tech Support Phone Number.
- 13 Contact Number** – Displays a user specified Contact Phone Number.
- 14 This Product Licensed to** – Displays the licensing information for the DVR unit.
- 15 System** – Displays the Processor and Memory that are installed inside the DVR.
- 16 Computer** – Displays the Operating System version installed on the DVR.
- 17 Site Version** – Displays the DVR Software version.

4.12

Log Viewer

The Log Viewer displays detailed information about the DVR, including Shut Down and Restart information, User Logins and Recording problems and failures. This can be a valuable tool to Administrators.

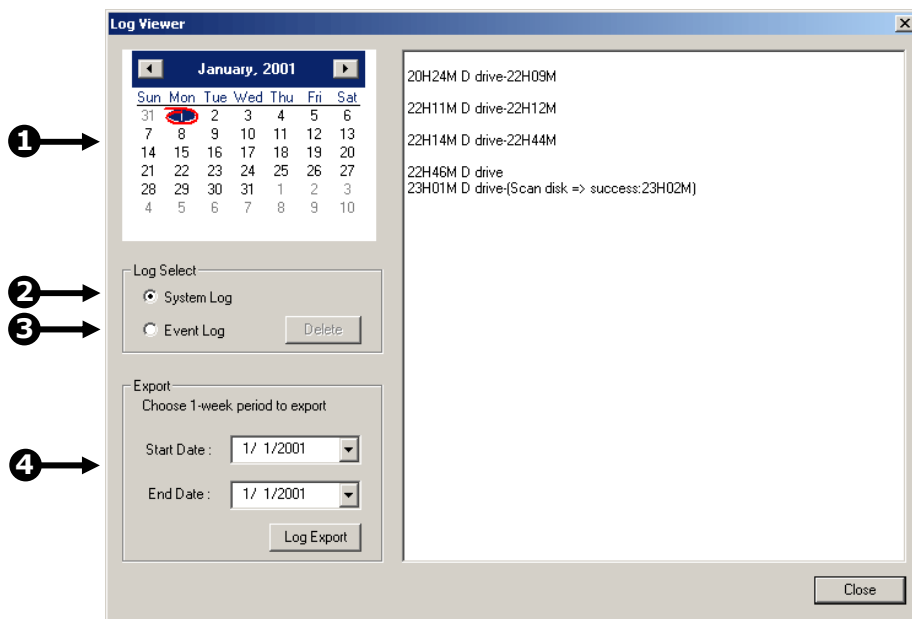


Figure 4.12

Figure 4.12

- 1 Calendar** – Displays the days with Log information in a bold format
- 2 System Log** – Displays the Hardware Log file information which includes Scan Disks, and system recording successes and failures.
- 3 Event Log** – Displays information pertaining to User Logins, DVR reboots and other related information.
- 4 Export** – Allows the log files to be exported in week increments.

4.13 User Management

The User Management Console allows you to create, edit, and delete user accounts. Each user account can be assigned different privileges that limit their usage of the DVR system. Users can be given administrator privileges by enabling all rights, however only the true administrator account can log into the User management Console.

Figure 4.13

- 1 User Information** – Enter the User Information, and Password.
- 2 Permission** – Allows you to specify the types of permissions a user may perform on the DVR.
- 3 Hidden Camera** – The Hidden Camera feature allows an administrator to hide certain cameras from a user. The user will not be able to view the cameras in Live Mode.

Figure 4.13

4.13.1 Changing the Administrator Password

Changing the Administrator Password

- 1) Inside Setup, open the user management console. An administrator login will appear with a 'Change Password' button near the bottom right
- 2) Select the button, enter the new password and press OK to finish.

4.14 Adjusting the Time and Date

To adjust the Time and Date follow these steps:

- 1) Begin by exiting to Windows. Do this by pressing the EXIT button from the Main Display Screen and selecting Restart in Windows Mode. (See Section 3.3)
- 2) Open Windows Explorer. Do this by right-clicking on the My Computer Icon (located on the top left hand corner of the Desktop) and select Explore.
- 3) Double click on CONTROL PANEL to open it. If you do not see CONTROL PANEL listed, double-click MY COMPUTER to expand the folder tree.
- 4) Double Click on DATE/TIME inside Control Panel. (See Figure 4.10a)
- 5) Adjust the Date and Time.
- 6) When finished, close all open windows and restart the HDDR unit. DO this by pressing the START button (Located on the lower left hand side of the Desktop) and selecting SHUT DOWN.

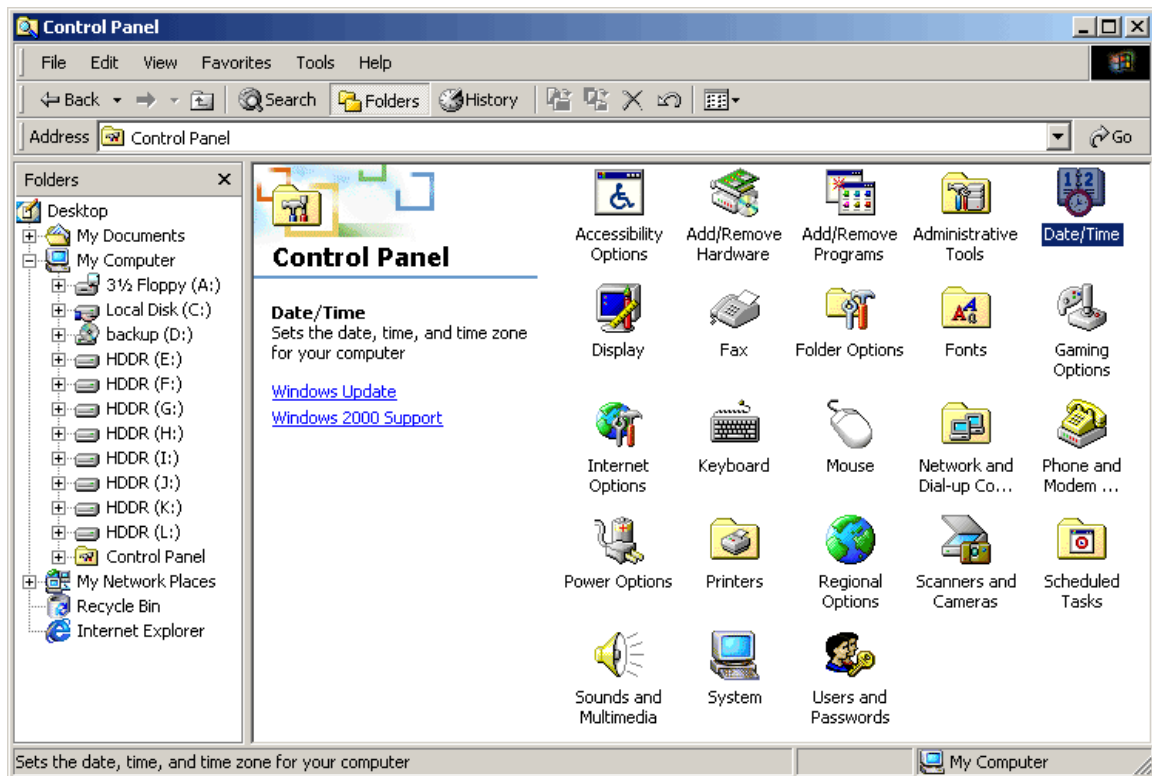


Figure 4.14

CHAPTER 5

Search Options

This chapter includes the following information:

- Setup Overview
- Channels
- Color
- Schedule
- Speed
- Motion Detect
- Password
- Pan/Tilt
- Quit to Explorer

5.1 Search Overview

The HDDR unit has several options that allow you to easily search through, and find, a particular section of video. From Motion indexing and Sensor indexing to calendar views showing which days have recorded video, the HDDR unit is equipped to help you quickly find what you're looking for.

The following chapter will describe in detail how to use the HDDR Search features.

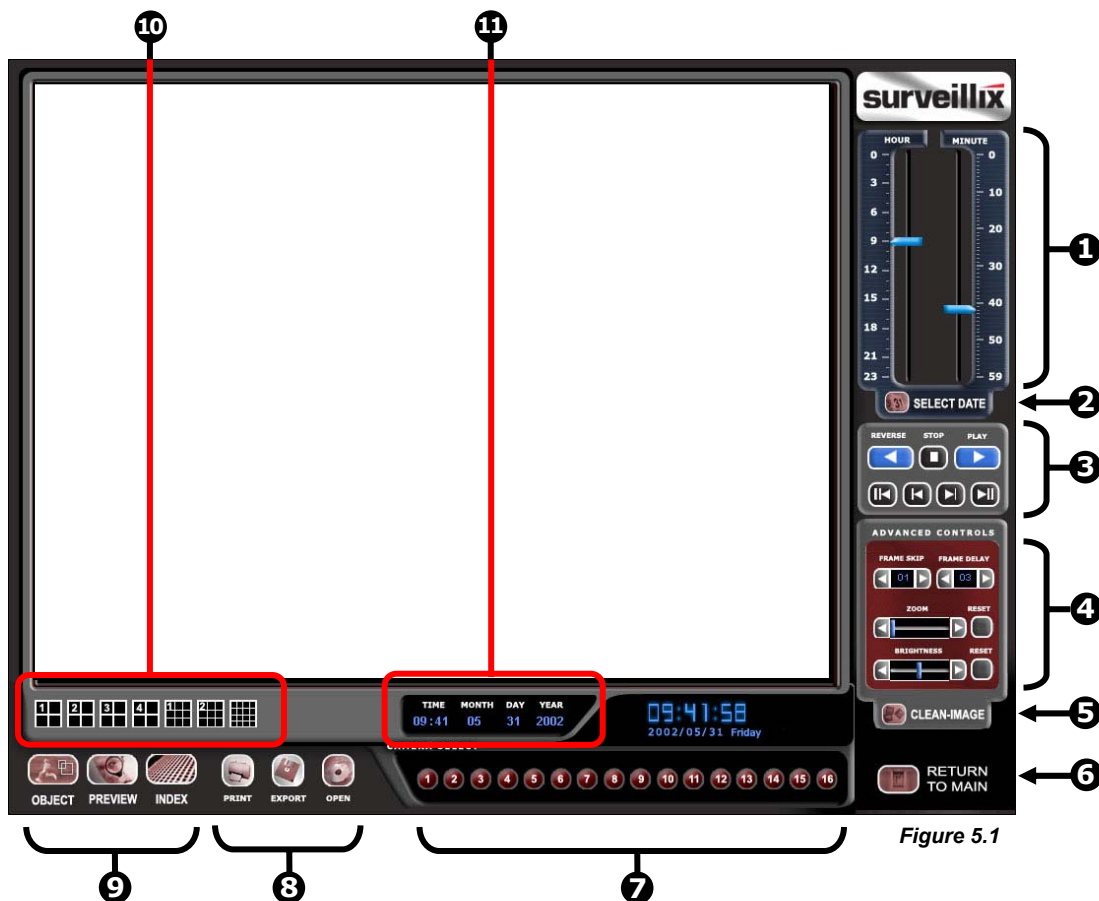


Figure 5.1

Figure 5.1

- 1 Hour / Minute Control Bar** – Allows you to select the hour and minute by adjusting the sliding bar.
- 2 Select Date** – Opens a calendar window and allows you to select a day to perform a search on.
- 3 Play Controls** – The options allow you to view selected video Frame by Frame, Normal Speed, and Fast Forward.
- 4 Advanced Controls** – Allows you to perform operations such as adjusting the speed, brightness, and zooming.
- 5 Clean Image** – Often time's extensive motion can create a 'digital blur' that can interfere with the quality of an image. By selecting the Clean Image option, two frames are interwoven to create a smooth, detailed image.
- 6 Return to Main** – The Return to Main button exits out of search and returns you to the Main Display Screen.
- 7 Camera Select** – Allows you to enable (or disable) selected cameras to perform searches on.
- 8 Print/Open/Export Options** – These options allow you to print images, save single images to disk and load saved video from disk.

- ⑨ **Search Options** – The search options are a set of functions that allow you to easily find the specific video clips you want and to export them to a usable format
- ⑩ **Screen Division Buttons** – The Screen Division buttons allow you to view one or more sets of cameras at a time. They are organized in several different groups such as.
- ⑪ **Search Date and Time** – Displays the Date and Time of the video being played.

5.2 Play Controls

The Play Controls allow you to play the video Frame by Frame, Normal Speed, and Reverse.

Figure 5.3

- ① **Stop** – This option stops any video that is currently playing.
- ② **Play (Normal Speed)** – This option plays the video at normal speed.
- ③ **Jump to End** - This option when pressed jumps to the end of the recorded video.
- ④ **Play (Frame by Frame)** – This option plays the video one frame at a time (One frame each time the button is pressed).
- ⑤ **Play Reverse (Frame by Frame)** – This option plays the video one frame at a time in reverse (One frame each time the button is pressed).
- ⑥ **Jump to Beginning** – This option when pressed jumps to the beginning of the recorded video.
- ⑦ **Play Reverse** – This option plays the video at normal speed in Reverse.

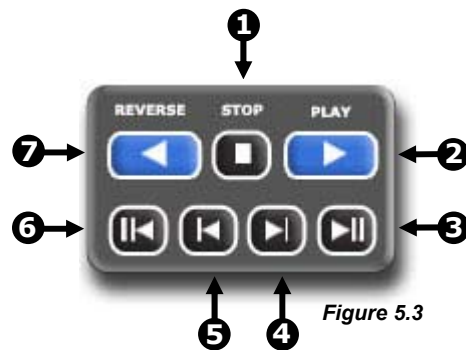


Figure 5.3

5.3 Hour / Minute Control Bar

The Hour/Minute Control Bar allows you to select the Hour and Minute using an easy-to-use slide bar. You can control the slide bar not only by clicking and dragging the slider but also using the Wheel on the Scroll Mouse.

Figure 5.3

- ① **Hour Selector** – The Hour Selector displays the hours for a given day 0 to 24. Move the Slide Bar Selector up and down to select an hour.
- ② **Slide Bar Selector** – The Slide Bar can be moved up and down to select the hour and minute.
- ! **TIP:** By using the Wheel on the mouse, you can easily move the Slide Bar Selector up and down. Simply click on the Slide Bar Selector with the Mouse and then begin moving the Wheel up and down.
- ③ **Minute Selector** – The Minute Selector displays the minutes for a selected hour 0 to 60.
- ④ **Select Date** – Opens a calendar window and allows you to select a day to perform a search on.

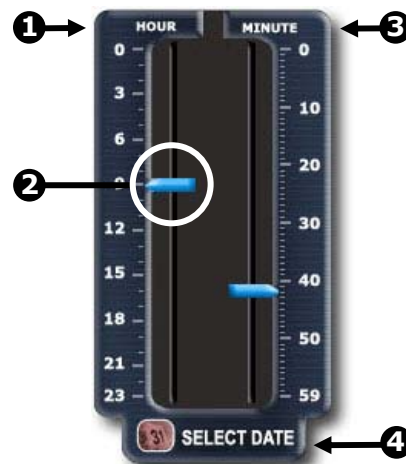


Figure 5.3

5.4 Advanced Options

The Advanced Controls allow you to get the most out of your serach. Using the Brightness you can brighten up an image to get more detail. Using the Zoom feature you can not only bring the image up full screen, but you can also Zoom into a particular area of the image.

Figure 5.4a

- 1** **Frame Skip** – This option skips the selected number of frames on playback. This causes the video to be played back at an accelerated rate.
- 2** **Zoom** – The Zoom Selector allows you to Zoom in on an image.
- 3** **Brightness** – The Brightness selector allows you to adjust the Brightness of an image.
- 4** **Clean Image** – Often time's extensive motion can create a 'digital blur' that can interfere with the quality of an image. By selecting the Clean Image option, two frames are interwoven to create a smooth, detailed image.
- 5** **Frame Delay** – This option pauses on each frame for the specified time. When used in conjunction with the 'Skip' option, video can be played back quickly while still easily distinguishable.

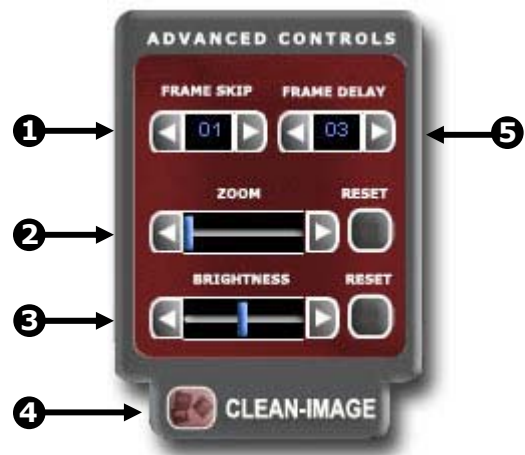


Figure 5.4a

Adjusting the Brightness of an Image

- 1) Select a single image to adjust by double-clicking the left mouse button on the desired image. You cannot adjust multiple images at one time.
- 2) Using the Bright Slide Bar, move the bar to the right or the left. To reset the Brightness press the Reset Button

Zooming in on an image

- 1) Select a single image to adjust by double-clicking the left mouse button. You cannot adjust multiple images at one time.
- 2) Using the Zoom Slide Bar, move the bar to the right or the left. To reset the Brightness press the Reset Button.

Zooming in on a portion of an image

- 3) Using the Mouse Pointer, point to an area on the image where you would like to zoom in on and press the Right-Mouse Button.
- 4) Keep pressing the Right-Mouse Button to zoom in further. After a certain number of clicks, the image will revert back to its original size.

Increasing the Playback Speed

- 1) Increase the speed of the video by increasing the Skip amount. Do this by clicking the Up and Down Arrows on the Skip Button (See Section 5.4). The maximum Skip rate is 30. Normal speed is 0

Clean Image

- 1) The HDDR unit is capable of recording video using one of three different resolutions. When using the 720 x 480 resolution, two fields are mixed. Because of the timing gap between the two fields, according to the standardized image rules, a little afterimage might occur to high speed moving images. The Surveillix® HDDR unit allows you to remove this by pressing the CLEAN IMAGE button.

The images below demonstrate the filtered screen.

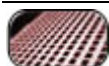


Figure 5.4b
Filtering Display playback

5.5

Search Options Overview

The Search Options allow you to find what you want quickly, enhance the image quality, and export the video or images in a number of ways.



Index Search – This option allows you to perform a search based on Motion detection, Sensor activation, and ATM/POS transactions. This search allows you to quickly narrow down large amounts of recorded video based on that criterion.



Preview Search – The Preview search is a Search option that allows you to narrow down recorded video in a 24 Hour period. It breaks down a single day into 24 images, one image for each hour of the day (The images are taken from the first second of each hour). When an image is selected, the 'hour' chosen is then broken down into 6 images, one image for every 10 minute increment. Finally when another image is selected, 10 images are displayed, one for every minute within the 10 minute period. From this point, the selected image can be applied to the Main Search.



Object Search – The Object Search allows you to specify a region on an image and perform a search based on any motion that has occurred within that region.

5.6

Performing a Basic Search

There are several different types of searches that can be performed on the HDDR unit. The following section will cover the most basic of these. This involves simply selecting the date, the time, the camera, and pressing play.

Performing a Basic Search

- 1) Begin by selecting a Date. Do this by opening the Calendar (See Section 5.3) and selecting a day.
- 2) Select a Time. Do this by adjusting the Hour and Minute Slide Bars (See Section 5.3).
- 3) Select a One or More Cameras (See Section 5.1).
- 4) Press the Play Button (See Section 5.2).

You can now play the Video Forwards, Backwards, and Frame by Frame (See Section 5.2).

5.7

Print/Open/Export Images

Once you find the video you are looking for you can Print it, Save it as a single image or Save it as a video clip. In addition you can also open and play video that has previously been saved to a disc or hard drive.



Print – This option allows you to output a selected image to an attached printer.



Save – This option allows you to save a selected image as a JPG file or to save a video clip in an AVI format.



Load – The Load Option allows you to search and view video that has been saved to media such as a CDR, CDR-W, or External Hard Disk Drive.

5.7.1

Print

The HDDR unit allows you to print a recorded image to a local or network printer.

To print an image, follow these steps:

- 2) From the Search Screen, stop on the image you wish to print. Make sure only one camera is selected by double-clicking on the image you want. (Only one camera should be displayed)



NOTE: Only one camera can be selected at a time for this function to work.

- 3) Select the Print Button. A Print Options window should appear.
- 4) Depending on the printer you are using you may have several printing options available to you. (Refer to your printer manual for more information)
- 5) Press the 'Print' button to print the selected images.

If you do not have a printer installed, the 'NO DEFAULT PRINTER INSTALLED' message will appear.

5.7.2

Save to JPG or AVI

The HDDR unit allows you to export single images in the JPG file format and save video clips in an AVI format. Both JPG and AVI file formats are the most commonly used graphical formats today. Virtually every computer offers some type of support for these file formats and therefore make them the most ideal formats to use.

Definition

JPG: (Joint Photographic Experts Group) - The name of the committee that designed the photographic image-compression standard. The format (.jpg) is optimized for compressing full-color or grayscale photographic images. JPG images are 24-bit (16.7 million color) graphics.

AVI: (Audio/visual interleaved) files are one of the more popular animated image formats in use today. They are most often used for video playback, though they are also used for more simple things such as the Windows "file copy" and "search" animations. AVI image data can be stored uncompressed, but it is typically compressed using a Windows-supplied or third party compression and decompression module called a codec.

Figure 5.10

- ① **JPG File** – Saving to a JPG File allows you to export a single image (or frame).
- ② **AVI File**– Saving to an AVI File allows you to save a video clip.
- ③ **AVI Duration** – Allows you to enter a duration to record the AVI for (in seconds). Although 100 Seconds is the longest displayed, you can manually enter a longer time.
- ④ **Image Quality** – Often times it is necessary to reduce the overall size of an AVI file (When you wish to email it to someone for example). You can do this by reducing the image quality. By reducing the image quality, the AVI video appears more Pixilated. When size is not an issue setting the quality to 100 is highly recommended.
- ⑤ **Export** – The Export button begins the saving process.

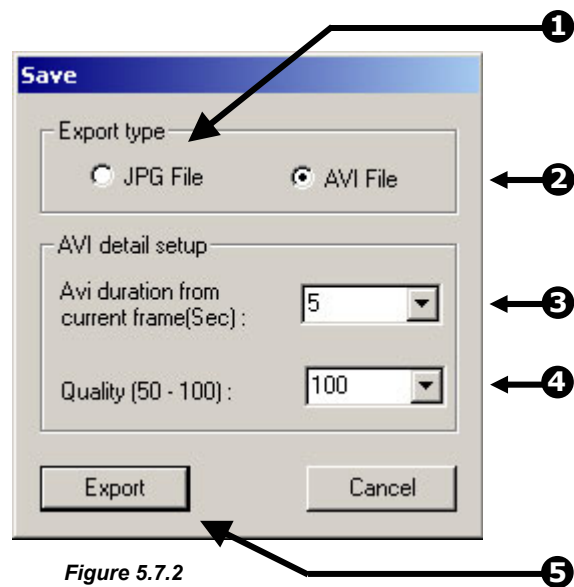


Figure 5.7.2

5.8 Index Search

Using the Index Search can greatly decrease the amount of time spent searching through saved video. The Index Search allows you to perform a search based on criteria such as Sensor, Motion and Instant Record events.

Figure 5.11a

- 1 Select Camera** – Allow you to either select a single camera to search or select all the cameras at once.
- 2 Sensor** – Searches by all sensor events on the selected camera(s).
- 3 Motion Detection** – Searches by all Motion events on the selected camera(s).
- 4 Instant Record** – Searches by all Instant Recording events on the selected camera(s).
- 5 ATM/POS** – Searches by ATM/POS Transaction Number.
- 6 All Event** – Searches on all events for the selected camera(s) (Sensor, Motion, Instant Recording, and ATM/POS).

Performing an Index Search

- 1) Begin by Selecting the Index Search Button. The Index Search Option Box should open.
- 2) Select a single camera or select the ALL cameras option.
- 3) Select an Event to search on. (Sensor, Motion, Instant Record, or ATM/POS). If you select ATM/POS you have the option to enter a specific transaction number. If no transaction number is entered all transaction will be displayed.
- 4) Press the 'OK' Button. (It may take a minute or two to return the results)

If there are results found, they will be displayed in a column on the left side of the screen (See Figure 5.8b). If there are no results found, 'No Images Found' will appear in the column.

- 5) Once the results are displayed you can search through them by simply double-clicking any one of the results.
- 6) Once you have found the image you are looking for, apply it to the Main Search by selecting the 'Close' Button located at the bottom of the results column.

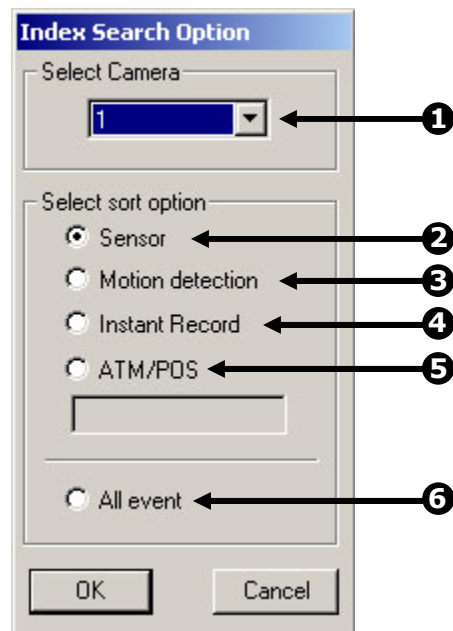


Figure 5.8a

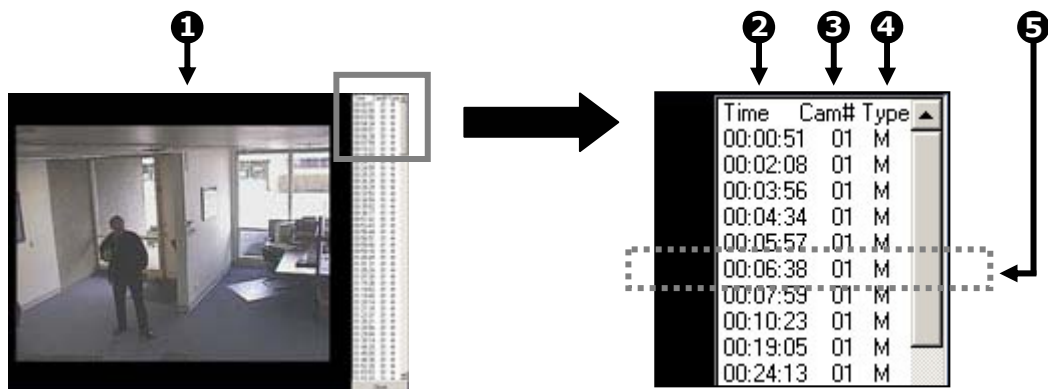


Figure 5.8b

Figure 5.11a

- ① **Image Display Area** – The Image Display Area is where the Search Results Images are displayed.
- ② **Time** – Displays the Time of the result.
- ③ **Camera Number** – Displays the Camera Number for the returned result.
- ④ **Type** – Displays the Event Type.
 M Motion
 S Sensor
 IR Instant Record
- ⑤ **Search Results** – Displays the results of the search. Each line represents a segment of video.

5.9

Preview Search

The Preview Search can be used in a number of circumstances to quickly find an exact moment where an event such as a theft occurred. The Preview Search basically gives a 24 Hour visual overview of a single camera by separating a 24 hour period (1 day) into 24 images, one image for each hour of the day. The search can then be further narrowed down into ten minute increments and one minute increments by simply selecting one of the images displayed.

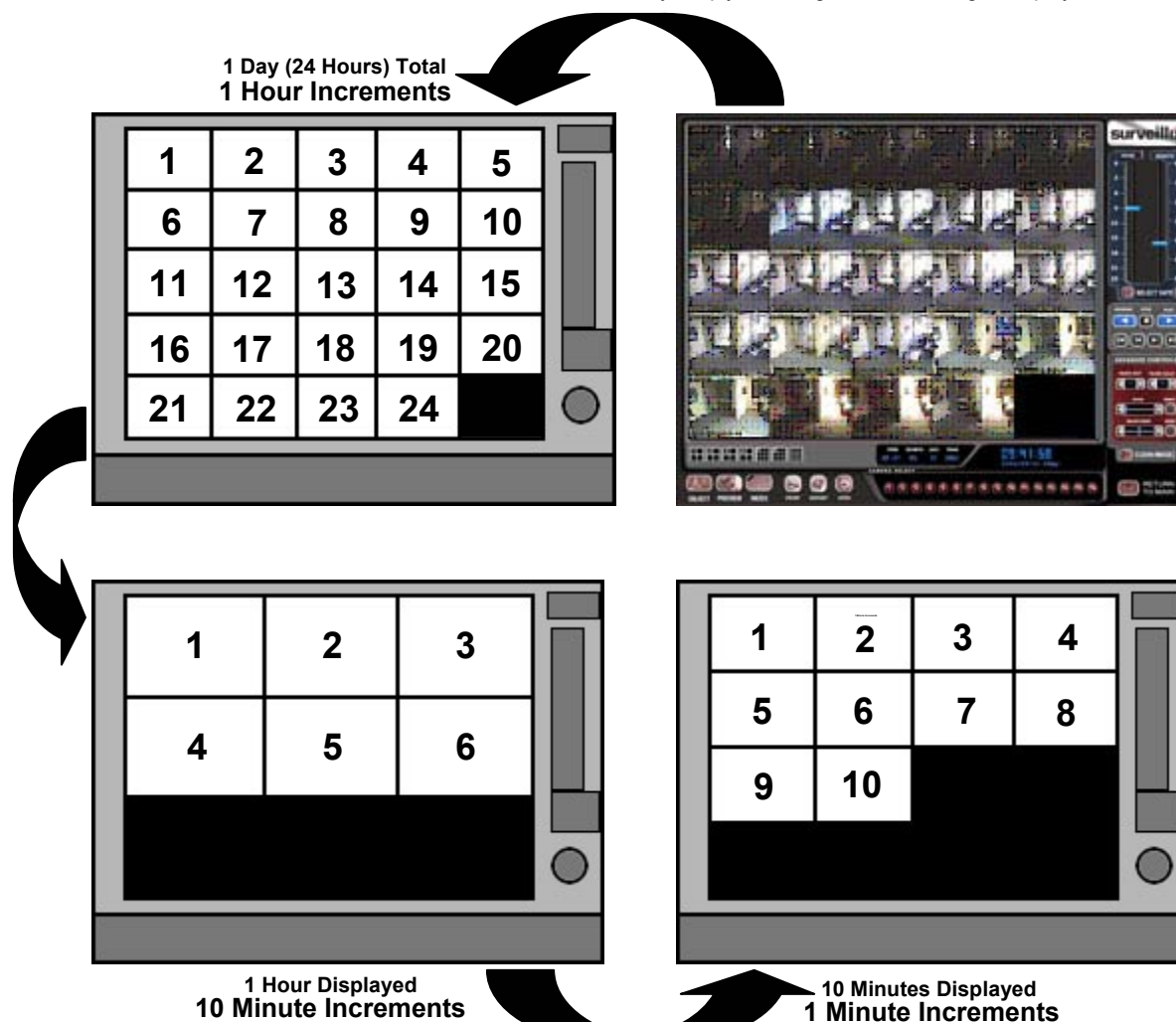


Figure 5.9

The Object Search is a powerful Search utility that allows you to search a region on the video for any motion changes. The Results are neatly displayed and allows you to view them quickly.



Figure 5.10a

- | | |
|----------|--|
| 1 | Search Results – The Search Results are displayed in this column. The results are listed by date and time. When the search is complete you can view the results by double-clicking on one of the results or by using the Up and Down arrow keys on the keyboard. |
| 2 | Search Information – The Search Information box displays brief information on the overall search. |
| 3 | Cancel – Selecting the Cancel button exits the Object Search. |
| 4 | Stop – The Stop option stops the current search. |
| 5 | Apply to Main Search – Apply to Main Search exits the Object Search but takes the selected result (the current image displayed) and displays it inside the Main Search. From that point you can use the Play Controls. |
| 6 | Reload First Frame – This option reloads the initial Key Frame image, that is, the image used to start the search. |
| 7 | Clear Selection – This option clears the current Motion Region Box from the Keyframe Image. |
| 8 | Start Search – This option Begins the search. |
| 9 | Motion Region Box – The Motion Region Box is the user defined area of the Keyframe image. You create the Motion Region Box by clicking inside the image and dragging the mouse. The Motion Region Box can be resized by pulling on the little square boxes located on the outer perimeter of the Box. |

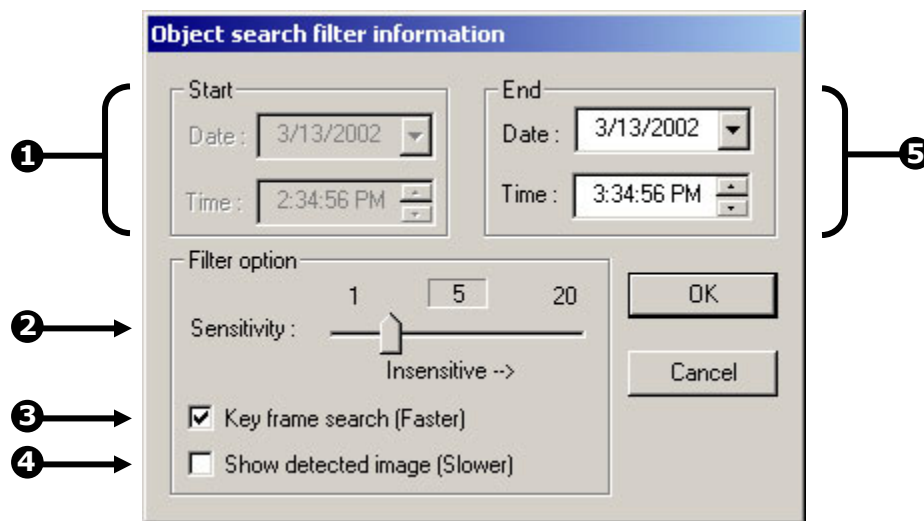


Figure 5.10b

Figure 5.10b

- | | |
|----------|---|
| 1 | Start – This displays the time and date of the initial Key Frame. |
| 2 | Sensitivity – The Sensitivity option allows you to control sensitivity of the motion that will be detected. Often time's poor lighting conditions can be interpreted as motion. The sensitivity can compensate for this. |
| 3 | Key Frame Search – Selecting the Cancel button exits the Object Search. |
| 4 | Show Detected Image – This option, when selected, displays the results as it finds them. Using this option slows the search process slightly and therefore may not be ideal when searching large periods of time. |
| 5 | End – This option allows you designate an end time. The default is one hour. |

Performing an Object Search

-
- 1) Begin by selecting a single camera. You can do this either by turning off all cameras but one, or by double clicking a displayed image (it will then be the only image displayed on the screen)
 - 2) Select the Object Search Button.
The Object Search window will open.
 - 3) Create a Motion Region Box on the image. Do this by clicking inside the image and, while holding the left mouse button down, drag the pointer. When the desired shape is created, simply let go of the mouse-button. Only One Motion Region Box can be created. To delete the Motion Region Box press the Clear Selection button.
 - 4) Press the Start Search button.
The Object Filter Search Information window should open.
 - 5) Select an end time. One hour is the default setting.
 - 6) Adjust the Sensitivity if necessary.
 - 7) Press the OK button.
The Search will begin. When results are found they will be displayed in the column to the right. If no results are found the search will end and 'No Images Found' will be displayed in the column.
To stop a search, press the STOP button.
 - 8) When the Search has ended double-click on one of the results. Use the Up and Down arrow keys to scroll through the results quickly.
 - 9) When you have found the image you are looking for, select the APPLY TO MAIN SEARCH button.
You can now use the Play Controls.
-

CHAPTER 6

Pan / Tilt / Zoom

This chapter includes the following information:

- Overview
- Setting up the PTZ
- Creating and Viewing a Preset Position
- Creating and Viewing a Preset Pattern

6.1 PAN/TILT/ZOOM Overview

The PTZ controls within the HDDR unit allow for powerful control over the cameras. This can be extremely beneficial by increasing the usefulness of the recorded video. Using the PTZ controls you can create custom preset configurations that can continuously sweep across large areas.

6.2 Setting Up a PTZ Camera

Setting up a PTZ Camera is simple. The HDDR unit comes preassembled with an internal RS-422/485 adapter.

Setting up a PTZ Camera

- 1) Locate the PTZ adapter. (See Section 2.1)
- 2) Connect the PTZ adapter to the PTZ. (See Figure 6.2 Since each camera is different, refer to your PTZ camera manual for detailed instructions.
- 3) Assign the PTZ Camera an ID number that coincides with the number assigned to it by the HDDR unit. For Example: If the HDDR unit specifies the camera as Camera 5, you must set the PTZ unit to ID Number 5.
- 4) Inside setup, select the camera number and then enable the PTZ option. Once enabled, the Protocol can be edited. Select the proper Protocol. (See Section 6.3)
- 5) Press the APPLY button and exit Setup.
- 6) From the Main Display Screen select the PTZ button. The PTZ Control options should open.
- 7) Select the PTZ camera by clicking on it. The camera number should appear inside the PTZ controls.
- 8) Using the PTZ controls, you should now be able to move the PTZ around.

RS-422 ADAPTER	
RED	Positive
WHITE	Negative



Figure 6.2

6.3 PTZ Detail Setup

The PTZ options allow you to create custom preset camera positions that either move to a particular location or continuously sweep across large areas. The options inside the PTZ Options Menu may not be available for all cameras. The options are available ONLY if the PTZ manufacturer supports them.

Figure 6.3

- 1) **PTZ Focus Controls** – These options allow you to adjust the Pan, Tilt and Zoom on the PTZ camera.
- 2) **Speed** – The Speed option increases (or decreases) the speed of the Pan, the Tilt, the Zoom and the Focus.
- 3) **Address Setting** – These options allow you to adjust the Address Settings for the PTZ unit.
- 4) **Preset and Tour** – These options allow you to create Preset Positions and Tours.

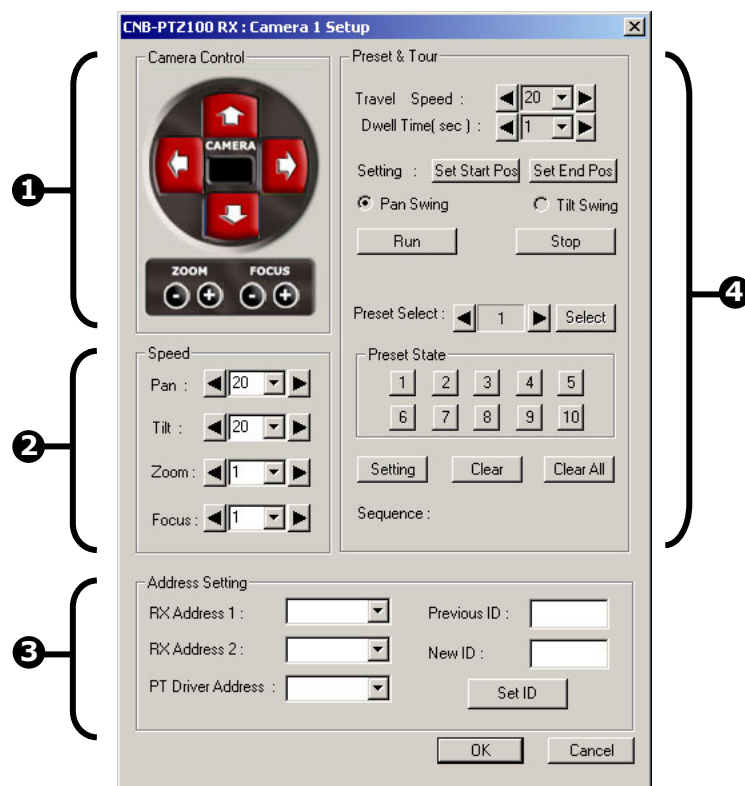


Figure 6.3

6.4 Creating and Viewing Preset Positions

A Preset Position is a user defined location where the camera can be pointed, zoomed in, and focused. You can define up to 10 preset positions per camera.

Creating a Preset:

- 1) Inside Setup, select the PTZ camera you wish to edit and then enter the Pan Tilt Detail Setup.
- 2) Inside the Pan Tilt Detail Setup select a Preset (1-10) using the Preset Select buttons. (See Figure 6.4)
- 3) Move the selected camera to the desired position using the Pan/Tilt/Zoom/Focus controls.
- 4) Once you have the camera in the desired position, press a Preset State button (1-10).
- 5) Select a Preset Position by clicking on a preset number (Presets 1-12)
The Preset is now saved.



Figure 6.4

Viewing a Preset:

- 1) From the Main Display Screen select the PTZ camera by clicking on it.
- 2) Using the keyboard press the number keys corresponding with the Preset Positions.
The Camera will move to the saved Preset.

CHAPTER 7

Backing up to a CDR-W Drive

This chapter includes the following information:

- Overview
- Enabling Backup Features
- Overview of DirectCD®
- Formatting a CDR or CDR-W Disc
- Saving Video to a CDR-W Drive
- Removing the Disc from the Drive

7.1 Backup Overview

The HDDR unit can easily backup important video to an internal or external media location. The most commonly used are CDR-W drives and Hard Drives. Since the HDDR unit comes standard equipped with a CDR-W drive, this Chapter will cover backing up using the CDR-W drive as well as by using a Hard Drive.

The HDDR unit backs up using a proprietary compression format that can only be read by the HDDR Backup program. This ensures the integrity of the data. In addition the CDRW also uses a proprietary format in which it stores the information. This format, called UDF, can only be read by a Computer which has the UDF reader software installed. You will find a copy of Roxio® UDF Reader on the Software Installation Disc shipped with the HDDR unit. A copy is also available for download from Roxio® direct (<http://www.roxio.com>).

During the backup process the HDDR unit will never stop recording. The HDDR unit is multiplexing unit that can perform virtually all functions without having to stop the recording process.

7.2 DirectCD® Format Utility

The Surveillix HDDR unit uses DirectCD® 5.0 to save the data to a CDR-W Drive. This allows the HDDR unit to use the CDR-W just as it would any other Hard Drive attached to the unit, both reading and writing to it. CDR and CDR-W discs must be formatted in the Direct CD 5.0 UDF standard for the HDDR unit to recognize them. It is recommended that CDR discs and NOT CDR-W discs be used in the HDDR unit. This is only because of the format time and cost difference between the two. It can take 45 minutes to an hour to format a CDR-W disc but only 15 to 30 seconds to format a CDR disc. In addition, CDR discs are generally considerably cheaper than CDR-W discs.



Figure 7.2
DirectCD® Format Utility

- 1 Window Control Buttons** – These buttons allow you to close or minimize the DirectCD format Utility window as well as bring up the Help screen.

CAUTION: Even though many features are available within DirectCD, it is highly recommended that you do NOT use any features within DirectCD other than those necessary for the standard exportation of video as outlined in this chapter. Loss of information or software instability could result

- 2 CD Select** – Use this Dropdown Selection box to choose the CDR-W drive attached to the HDDR unit. Generally it is defaulted to the proper CDR-W drive.
- 3 CD Utilities** – Allows you to do repairs on discs that have become unstable or failed completely.

-
- 4** **Format CD** – Use this option to format a CDR or CDR-W so that it can be read by the HDDR unit.

 - 5** **Eject CD**– This option allows you to remove the CD from the drive after specifying how you would like to end the recording session.

 - 6** **Options** – This button allows you to adjust options pertaining to the operation of DirectCD.

 - 7** **Help** – This option opens the DirectCD help file.

7.3

Formatting a CDR or CDR-W Disc

To format a blank CDR or CDR-W disc to be used by the HDDR follow these steps:

Format a CDR or CDR-W Disc on the HDDR unit

-
- 1) Exit and Restart in Windows Mode (See Section 3.3).

 - 2) Insert a blank CDR or CDR-W disc into the CDR-W drive.

 - 3) Double-Click the DirectCD icon located on the Desktop.

 - 4) Press the FORMAT CD button (as shown in Figure 7.2).

The Disc should now be formatting. A CDR Disc will take anywhere from 15 to 30 Seconds to format and a CDR-W disk will take anywhere from 45-60 Minutes. When finished the CD READY window will open (See Figure 7.3)

-
- 5) Press the OK button.

 - 6) When finished Double-Click the HDDR Icon located on the Desktop. This will open the HDDR software.



Figure 7.3
DirectCD® CD Ready Window

7.4 Backup Options Overview

The BACKUP OPTIONS window allows you to select the video you wish to save and also the location of where to save it.

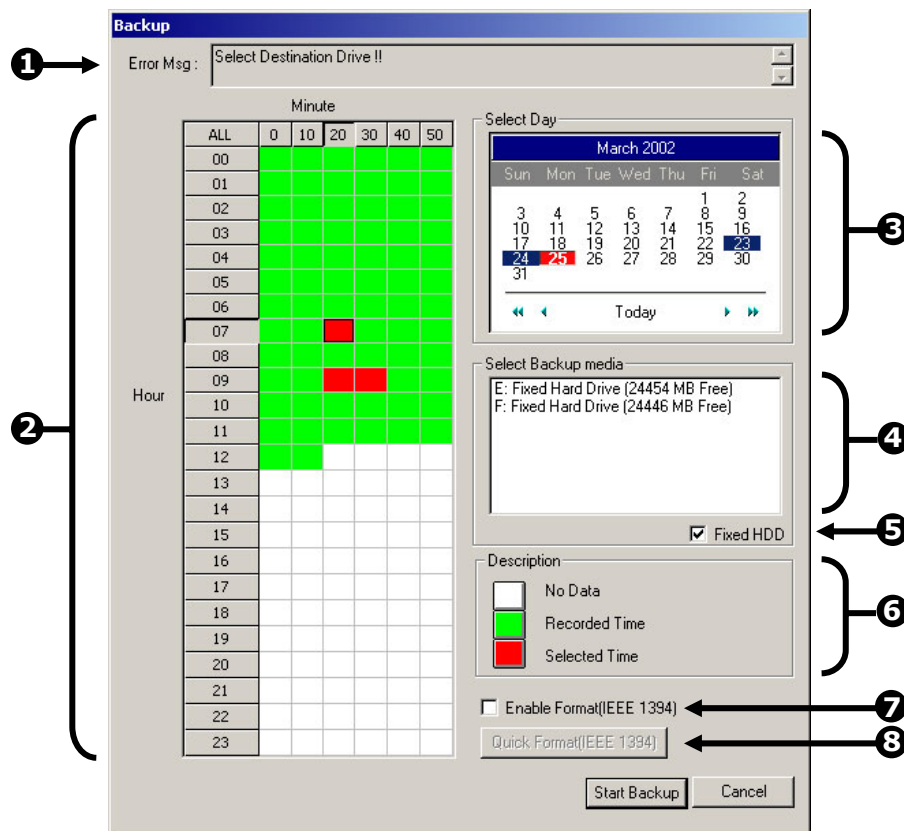


Figure 7.4
Backup Options Window

Figure 7.4

- 1 Error Message** – This box displays any problems encountered with the current selected options. For example: If the amount of video selected exceeds the storage capacity of the CDR-W Disc, then a message will be displayed.
- 2 Hour/Minute** – The overall time displayed in the Hour/Minute chart is 24 Hours. This is broken down into 10 minute increments. The color coded boxes represent either, No data, Recorded Data, or Selected Data (See the Description Box). You can select a time by clicking on one the boxes. To deselect it, simply click on the box again.
- 3 Select Day** – The Select Day is a Calendar that allows you to select the day. If video is recorded on a given day the day will be highlighted. The Current day is always highlighted in red.
- 4 Select Backup Media** – The SELECT BACKUP MEDIA box displays available backup locations. If a formatted CDR or CDR-W disc is inserted the drive letter and the amount of free storage on the disc will appear. To view all the available Hard Drives on the HDDR put a check in the FIXED HDD box.
- 5 Fixed HDD** – By checking this box, all the available Hard Drives (Including Mapped Drives) will be displayed inside the SELECT BACKUP MEDIA box.
- 6 Description (Key)** – The DESCRIPTION simply displays the color coded key for the HOUR/MINUTE chart.
- 7 Enable IEEE (1394)** – This option enables the IEEE (1394) devices that may be attached to the HDDR.
- 8 Quick Format IEEE (1394)** – This option performs a quick format of the attached IEEE (1394) device.

7.5 Backing up to a CDR-W Drive or Hard Drive

To Backup video files to a CDR-W drive, or to a Hard Drive, follow these steps:

Backing up to a CDR-W Drive or Hard Drive

- 1) Begin by placing a DirectCD® UDF formatted disc into the CDR-W drive if you wish to backup using the CDR-W drive. (See section 6.3 for more information on how to format a disc)
- 2) From the Main Display Screen select the BACKUP button. (See Section 3.3)

The BACKUP OPTIONS window should appear.

- 3) From the BACKUP OPTIONS window, select the day using the SELECT DAY calendar.
- 4) Select the time(s) to backup by clicking on the desired blocks.

The blocks will turn red when selected. To deselect the blocks, simply click on them again.

- 5) To Backup to the CDR-W media, click on the CDR-W drive that is displayed inside the SELECT BACKUP MEDIA box and then press the START BACKUP button.

To backup to a Hard Drive, check the FIXED HDD option. Select the desired Hard Drive from the SELECT BACKUP MEDIA box and then press the START BACKUP button.

If the amount of video exceeds the storage capacity of the media being used then an error message will be displayed inside the ERROR MESSAGE box. If this happens reduce the amount of video that is being exported or select another media device that has a larger storage capacity.

Once the START BACKUP button is pressed, the BACKUP OPTIONS window will close.

You can monitor the status of the recording process by viewing the Backup Progress bar. This can be seen on the Main Display Screen.

The Backup will be completed successfully when the Backup Progress Bar disappears from the Main Display Screen.

7.6 Removing the Disc from the CDR-W Drive

To remove the disc from the CDR-W drive follow these steps.

Removing the Disc from the CDR-W Drive

- 1) Press the Open button on the CDR-W drive.

The Eject CD Window should appear on the screen. (See Figure 7.6)

- 2) Select the LEAVE AS IS option to continue using the disc for future Backing Up by the HDDR unit. You may not be able to read the disk in other CDROM drives if this is selected.

Select the CLOSE TO UDF v 1.5 to view the data in standard CDROM Drives. The host computer that will be viewing the data must have Roxio UDF Reader installed to view the data. When this option is selected a copy of the UDF reader is automatically placed onto the CD. Therefore if the host computer does not have the UDF reader installed they can install it from the same disc that has the data.

Do not select CLOSE TO READ ON ANY COMPUTER. This option generally does not work and requires a new disc to be made.

- 3) Press OK.

The CDR-W drive door should open. Remove the disc and place in a protective sleeve or case.



Figure 7.6
Remove Disc from Drive

CHAPTER 8

LAN / ISDN / PSTN Connections

This chapter includes the following information:

- Overview
- Configuring TCP/IP
- Setting up a PSTN Connection
- Creating Users for PSTN Connections

8.1

LAN Overview

The HDDR unit can easily be connected to a Local Area Network. The HDDR unit uses Microsoft's powerful and secure Windows® 2000 operating system. This allows for easy and well documented instructions on setting up LAN connections no matter what type of LAN you want to use.

A Local Area Network is a group of computers and other devices dispersed over a relatively limited area and connected by a communications link that allows one device to interact with any other on the network. Local Area Network is also called LAN.

Examples of LAN connections include Ethernet, Token Ring, cable modems, DSL, FDDI, IP over ATM, IrDA (Infrared), wireless, and ATM-emulated LANs. Emulated LANs are based on virtual adapter drivers such as the LAN Emulation Protocol.

There are a vast amount of reasons why using Microsoft® Windows® 2000 is far superior to other platforms when running on a LAN. The number one reason is security. Windows 2000 is based on NT technology, which, historically has boasted the most reliable and secure Operating System in the world. Running the HDDR on a secure network is important to prevent unwanted users from gaining access to confidential information. Unwanted users can compromise the integrity of the confidential data being stored and viewed, and in extreme circumstances can cause irreparable damage to the network.

Since connecting the HDDR unit to a network can be extremely complex (depending on the network), this Surveillix® HDDR™ manual will cover the only the basics. It is suggested that you consult your Vendor or IT Administrator before attempting to create or connect to a LAN.

8.2

Connecting to a LAN using TCP/IP

The HDDR unit allows you to fully create and edit all Network settings available on Windows 2000. The HDDR unit comes equipped with a 10/100 Network Interface Card (NIC). This card uses a standard RJ-45 connector.

The HDDR unit comes preconfigured with an IP Address of [10.0.0.130] and a subnet mask of [255.255.255.0]. These IP settings will work for many users. If these IP settings are sufficient then you will not need to Configure TCP/IP.

Configuring TCP/IP Settings

- 1) Exit and Restart in Windows Mode (See Section 3.3).
- 2) Right-click on the MY NETWORK PLACES Icon located on the desktop and select PROPERTIES.
You should now see the NETWORK AND DIAL UP CONNECTIONS Window appear.
- 3) Right-Click on LOCAL AREA CONNECTION and select PROPERTIES.
You should now see the LOCAL AREA CONNECTION PROPERTIES Window appear..
- 4) Select the INTERNET PROTOCOL (TCP/IP) by clicking on it once. Once highlighted, select the PROPERTIES button.
The INTERNET PROTOCOL (TCP/IP) PROPERTIES Window should open.
- 5) Select the USE THE FOLLOWING IP ADDRESS option. Enter the IP Address and Subnet mask appropriate for your network. It is recommended that you contact your Network Administrator for appropriate IP settings.
Example: Common IP addresses are 10.0.0.25 – Common Subnet masks are 255.255.255.0

NOTE: In order to connect to the HDDR unit through a remote LAN connection, you must assign the HDDR a static IP address. If you are on a network that assigns the IP address automatically (DHCP), contact your Network Administrator for help assigning a static IP address.
- 6) If your network requires you to specify your DNS information, enter it now by selecting the appropriate DNS options.
- 7) When you have finished configuring your TCP/IP settings close the INTERNET PROTOCOL (TCP/IP) PROPERTIES Window by clicking the OK button.
- 8) Close the LOCAL AREA CONNECTION PROPERTIES Window by clicking the OK button.

-
- 9) You may need to restart Windows for the changes to take effect. Do this by pressing the START button on the Desktop and selecting Shut Down.
-

Connect the HDDR to a LAN

-
- 1) Using a standard RJ-45 Cable, plug one end into a Hub (or Network Jack ultimately connected to a hub) and the other end into the HDDR unit. (See Section 1.3)
-

Appendix A

Appendix A contains electromagnetic compatibility information and optical and acoustical statements.

Electromagnetic compatibility

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Operation of this device is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept interference received, including interference that may cause undesirable operation.
- Cables used with this device must be properly shielded to comply with the requirements of the FCC.
- You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Optical and Acoustical Statements

Visible LED Statement

The LEDs on this HDDR unit are classified as "Class 1 LED Product" in accordance with EN 60825-1.

Laser Safety Statement for a Class 1 Laser Product

This CDROM Storage device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference. If this equipment does cause harmful interference to radio or television reception, the user is can attempt to correct this by following one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

This mass-storage system does not produce hazardous laser radiation. Because laser light emitted inside the mass-storage system is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.



CAUTION: Due to the extremely fast rotation speed of the CD-ROM drive spindle motor (9000 ~ 12000 rpm), the drive's performance could be affected by using substandard discs. These substandard discs may be damaged, or damage the CD-ROM drive.



CAUTION:

- Always check each disc for cracks before using it. If there are cracks on the surface, especially on the border of the center hole, do not use it in the CD-ROM drive. Using such discs can cause irreparable damage to the CD-ROM drive.
- Do not leave discs in direct sunlight or in a hot, humid location.
- Always remove discs from the drive after use.
- To protect the discs from scratches, never touch their face or place them face down on a hard surface.
- Do not affix highly adhesive stickers to a disc.

Regulation on Noise Declaration for Machines

Lpa < 70 dB operator position, normal operation, per ISO 7779

Appendix B

Appendix B contains technical specifications for many of the HDDR internal components

Floppy Drive Technical Specifications

Item	
Storage Capacity (Unformatted)	1.0/2.0 MB
Track Density	135 TPI
Access Time (Average)	3 ms
Access Time (Track-track)	94 ms
Power Requirement	DC 5V± 10%
Power Consumption (Read Mode)	1.5W
Dimensions	101.6 mm x 25.4 mm x 150 mm
Weight	410 g
Media Type (Standard)	2DD/2HD
Media Type (ISO)	301/302

Network Interface Card Specifications

Item	
Specifications	- IEEE 802.3 10BASE-T - IEEE 802.3u 100BASE-TX
Protocol	CSMA/CD
Network Media	- UTP Cat. 5 (100m) - EIA/TIA-568 100-ohm screened twisted-pair (STP) (100m)
Network Data Transfer Rate	- 10Mbps (Half-duplex) - 20Mbps (Full-duplex) - 100Mbps (Half-duplex) - 200Mbps (Full-duplex)
Diagnostics LED	- Link - Activity - 100M - Collision/Full-Duplex
Emission	- FCC Class B - CE mark Class B

CDROM Technical Specifications

DRIVE PERFORMANCE	
Disc Data Capacity (MODE 1)	656 MB
Disc Data Capacity (MODE 2)	748 MB
Maximum Playing Time	74 Minutes and 42 Seconds
Data Transfer Rate (KB/s)	Write: 2X, 4X, 8X, 12X/1.8MB/sec (CD-R); 2X, 4X, 10X/1.6MB/sec (CD-RW) Read: Up to 32X (1X=150KB/s)
Average Access Time	120ms or less
Data Buffer Size	2MB
COMPACT DISC	
Disc Type (Data Format)	CD-Audio, CD-ROM (mode 1 and 2), CD-ROM/XA (mode2, from 1 and from 2), CD-I, Photo-CD (single and multiple sessions), Video CD, CD Extra, I-Trax CD, CD Text, and High Density (80-min) CD. *CD-I, Photo-CD requires special reader/player. *Photo-CD writing requires Kodak's license. *CD Text and High Density requires Nero
Disc Size	80 mm and 120 mm discs
INTERFACE	
Drive Interface Type	E-IDE/ATAPI (SFF8090)
EMI Safety Requirements	
FCC	FCC Part 15 Subpart Class B
BSMI	CISPR22
CE/C-Tick	EN55022/CISPR22/AS/NZS 3548 Class B, EN50082-1/AS/NZS 4252.1, EN60555-2, and EN60555-3
UL/CUL	UL1950
TUV	EN60950, EN60825-1
NEMKO	EN60950, EN60825-
POWER REQUIREMENTS	
Voltage	DC5V±5%, DC12V±10%
PHYSICAL CHARACTERISTICS	
Front Panel	Load/Eject button, Play/Skip button, Power-on/Busy LED indicator, 3.5 mm stereo headphone jack, volume control button
Rear Panel	Power Supply connector, IDE interface connector, master/slave jumper, analog audio output connector, digital audio output connector
Mount	Both vertical and horizontal
Dimensions	146x41.3x203mm (WxHxD)
Weight	≤ 1.0 kg (2.2 lbs)
ENVIRONMENTAL REQUIREMENTS	
Temperature (Operating)	+5°C ~ +40°C
Temperature (Non-Operating)	-30°C ~ +65°C
Humidity (Operating)	5% ~ 90% RH
Humidity (Non-Operating)	5% ~ 95% RH
LASER COMPONENT RADIATION DATA	
Wavelength	285 ± 25 nm
Emission light output power	Less than 0.3 nW
Pulse times	The time base is using 100s by requirement of IEC 825-1-1993 clause 9.3 (e)

MTRP (Maximum Transfer Performance) = normal speed * CD-ROM drive speed. (Tolerance 10%) Example: 40X CD-ROM MTRP = 150*40 = 6000 KB/sec.

Power Supply Technical Specifications

Overview

- Output over voltage protection
- Short circuit protection on all outputs
- Resettable power shut down
- Approved by UL 1950, CSA 22.2 Level 3, TUV EN60950, IEC 950
- Internal 12 VDC fan
- Built-in EMI filter
- Complies with FCC part 15 subpart J class B 115 VAC operation and CISPR 22 230 VAC operation
- 100% burn-in under high ambient temperature (50°C)
- MTBF above 100,000 hrs at 25
- 100% Hi-pot & ATE tested

Specifications	
Temperature range	Operating :0°C~50°C / Non-operating -20°C~80°C
Temperature coefficient	0.01%/°C
Transient response	Output voltage return in less then 1 ms max. following a 25% load change
Hold up time	16 ms minimum at full load & nominal input voltage
Dielectric withstand	Input to frame ground 1800 VAC for 1 second
Humidity	5~95% RH
Efficiency	65% Min., 70% typical, at full load
Power good signal	Power on delay time 100 ms to 500 ms, power fail > 1 ms
Overload protection	150% Max
Inrush current	80A max for 115 VAC or 100A max. for 230 VAC at 25° C ambient cold start
Over voltage protection	+3.3V output:4.5V max; +5V output: 6.5V max; +12V output: 15 V max
Input Characteristics	
Voltage	90-132 VAC or 180-264 VAC switchable
Frequency	47Hz to 63 Hz
Input Current	10.0A(RMS) for 115 VAC, 5.0A(RMS) for 230 VAC

	MINIMUM LOAD	NORMAL LOAD	MAXIMUM LOAD	LOAD REG	LINE REG	RIPPLE & NOISE
+3.3V	0.2A	8.0A	0.2A/16A	± 5%	± 1%	50mV P-P
+5V	2.0A	15.0A	30A/20.7A	± 5%	± 1%	50mV P-P
+12V	0.2A	5.5A	11.0A	± 5%	± 1%	120mV P-P
-12V	0.0A	0.4A	0.8A	± 5%	± 2%	120mV P-P
-5V	0.0A	0.15A	0.3A	± 5%	± 2%	120mV P-P
+5Vsb	0.0A	1.0A	2.0A	± 5%	± 1%	50mV P-P